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Public policy and economic fear: an experimental approach

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PUBLIC POLICY AND ECONOMIC FEAR: AN EXPERIMENTAL APPROACH

by

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DEDICATION

This piece is dedicated to my family: Kathy, Greg, Erin, and Claire Thesing. Your passion and pursuits constantly inspire my academic and life endeavors. Thank you for your constant support, guidance, and push to excel, do good for others, and remember the simple things in all aspirations.

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ABSTRACT

Political scientists have long studied the connection between macroeconomic performance and presidential approval, electoral success, and voter satisfaction. Given the purported relationship between economic anxiety and votes for Donald Trump, a better understanding of this relationship is timely. The present analysis improves upon the economic voting literature by assessing this connection in an experimental context. Using data collected from undergraduate students and a Mechanical Turk sample, this analysis measures differences in opinion between control respondents and treatment respondents who received various economic fear stimuli. In addition, the analysis questions whether policy opinions differ based on the interaction between a treatment and income level, and whether certain types of economic fear are more likely to shift policy opinions. This analysis finds that economic fear is not pervasive enough to shift policy support, but a variety of weak differences due to income interactions and fear-stimuli exist. Largely, this piece accords with analyses performed using nationally representative samples and defines American policy opinions as largely driven by income, education, and party identification.

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The 2016 Presidential election highlighted economic anxiety's national salience. The race between Hillary Clinton and Donald Trump pitted a candidate who was supportive of the Obama Administration's policies and legacy against one whose campaign tactics directly contradicted Republican political decorum. What the real estate and reality television star, Donald Trump presented was an economic fear tactic accumulating in a strategy of taking improbable societal changes and making citizens feel as if other candidates would leave their lives in peril. Although the present research is not aimed as a direct response to Trump's election, its timing proves pertinent to explain the degree to which economic fear explains his success (Casselman, 2017). As many Americans are feeling economically lost or forgotten, gaining a real understanding of how this economic fear translates into political reality is a necessity. The present analysis seeks to demonstrate the causal mechanisms behind economic fear and subsequent vote decisions. Given the pervasive economic rhetoric that shaped the 2016 election and the ultimate outcome, this study stands to explain how individuals translate short term economic angst into real opinions on policies and politician preferences.

The following paper approaches a distinctive view of political economy literature. Many political scientists have looked at the important relationship between economic conditions and vote choice. The largest portion of the literature focuses on Presidential and Congressional voting in the United States. Studying this relationship progresses political science because comprehending the connection between the economy and vote choice enables scholars to better predict election outcomes, understand the actions of rational politicians, and better gauge how the electorate transforms economic perceptions into a specific voting behavior. Furthermore, these concepts are not limited to scholars, but can be disseminated to journalists and the public. This paper attempts to improve upon the economic voting literature by obtaining experimental data to better tease out the causality behind how economic fear impacts policy support. In addition, rather than focusing on the sociotropic versus pocketbook voting argument, the present analysis sheds light on attitudes toward redistribution; specifically how these attitudes impact individuals' willingness to support equalizing social policy in the United States. This separate literature is vastly important to the present question, as demand for redistribution is shaped by economic adjustments, and acts as a source of economic fear for the poor and wealthy alike.

Much of the following work uses large-scale data sets to test this relationship. The traditional economic voting literature relies on observational data. Prior results have not reliably

demonstrated the extent to which economic fear specifically influences voting behavior as opposed to other independent variables. The primary focus of this paper is not to address the presidential realm directly, but rather to question how economic perceptions impact opinions on certain policies. Contrary to politicians, policies are tangible; they morph and shape a country's position in the global environment, and they directly impact citizens more than politicians in a democracy. Questioning the relationship between economic perceptions and policy support assists a conclusion regarding the behavior individuals resort to during periods of economic unrest. A second goal is to understand how rational politicians should propose these policies to best meet their constituents' preferences. Generally, this analysis relies on the opinions of college-aged respondents who are likely to be anxious about their finances in the near future as they finish their education and enter the job market. In addition, a survey using a Mechanical Turk sample will provide a more representative dataset. The results from this analysis prove generalizable, because the economic fear treatment is not exclusive to 18-22 year olds, but is a clear cycle throughout an individual's lifetime as one deals with debt, professional and family financial stress, and retirement.

Literature Review

I. A Look Back: The Origins of Economic Voting Studies

The relationship between the economy and politics is long-studied, and the correlation between the two fields offers much room for societal explanations. Tufte stated convincingly, "When you think economics, think elections; when you think elections, think economics (1978)." Ronald Reagan certainly understood the implications of economic voting when he requested that voters derive preferences based on their sociotropic economic opinions during Jimmy Carter's final year in office. Yet, literature predates this famed political occurrence; beginning in the 1950s, Downs and Key began assessing and testing hypotheses connecting ideas of rationality and voting behavior (1957 and 1966). In Downs' seminal book, *An Economic Theory of Democracy*, he posits that for voters to meet their maximum personal utility, they compare utility differences per party and vote for the party that would complete this utility maximization in the future (1957). Downs proposes that the rational voter "ground[s] his voting decision on current events [rather] than purely on future ones" (1957). Therefore, the rational voter compares the utility provided by the incumbent party to that of the opposition, had that party been in power in the current period. Using "trend factors," that is, applying the trends from

the current period to what can be expected in the future, as well as "performance ratings" of present political success, the rational voter can then apply the information from the current period to make a prospective decision for her future (Downs, 1957). This establishes rational decision-making in the economic voting field. Key's *The Responsible Electorate* analyzes "stand patters" and "shifters" in elections from 1936 to 1960 and focuses less on economic theory than data analysis (1966). Key contends that voters rely on the incumbent's performance to inform their vote choice:

> The patterns of flow of the major streams of shifting voters graphically reflect the electorate in its great…role as an appraiser of past events, past performance and past actions. It judges retrospectively; it commands prospectively only insofar as it expresses either approval or disapproval of that which has happened before (1966).

Key provides the primary argument for retrospective behavior: voters act in their self-interest by selecting whatever party benefitted them in the past. These clashing ideologies, one prospective and the other retrospective, act as the kindle for over 400 analyses of economic voting (Lewis-Beck, 2000).

These original pieces influence academics from both the U.S. and Great Britain to question the economic variables voters use, the timing in which these variables are put into play, and how they impact incumbent versus non-incumbent elections. In this sense, two different theories emerge. The first, and most largely supported theory is that of sociotropic voting (Kinder and Kiewiet, 1979, Kramer, 1983). A sociotropic voter forms his or her vote decision based off an evaluation of national economic conditions. This contrasts what is referred to as pocketbook voting, where one focuses on how their own personal conditions adjusted under a president and votes for a presidential candidate accordingly (Kinder and Kiewiet, 1979). Sociotropic voting tends to lend itself to the retrospective ideology, whereas pocketbook voting is often associated with prospective behavior (Kinder and Kiewiet 1979). Using individual time-series data from 1956 to 1972, Fiorina questioned whether citizens vote for or against the incumbent's party as a function of their "present economic condition" (Fiorina, 1981). He finds that for presidential elections, pocketbook conditions have a statistically significant impact on vote choice (Fiorina, 1981). Between 1956 and 1972, Fiorina finds voters who evaluated their economic position as "the same" or "better" than one year before the election were more likely to

support the incumbent party (1981). This work hinders Key's belief that voters look retrospectively to form their vote choice and supports the Downsian model (Woon, 2012).

Yet, the pocketbook-effect is not upheld throughout the entirety of the literature. Kinder and Kiewiet's equally seminal analysis upholds sociotropic decision making (1979). They utilize cross-sectional data to question how economic perceptions impact votes for Presidential and Congressional candidates and find "American voters resemble the sociotropic ideal" (Kinder and Kiewiet, 1979). Their conclusions accord with Downs and Key; voters who act sociotropically certainly vote retrospectively by questioning the past performance under the incumbent, but these voters also rationally account for future aspirations (Kinder and Kiewiet, 1979).

Further still, discussion of economic voting theory would be incomplete without mention of Kramer's 1983 *The Ecological Fallacy Revisited*. Kramer lights into sociotropic voting propositions, most specifically Kinder and Kiewiet's work, because they use individual-level rather than aggregate-level data (1983, 1979). Furthermore, Kramer posits that individual-level data are subject to "statistical artifact" (1983). He contends that changes in individuals' welfare consist of components that cannot be seen because they are "government induced," exogenous, and apolitical occurrences (Kramer, 1983). Kramer suggests that analyses like Fiorina's serve as better estimates of voter's economic decision making (1981). Kramer concludes that aggregating data allows for a distinction between self-interest and sociotropic behavior, and regressing individual level cross-sectional votes on economic perceptions does not reveal sociotropic attitudes (Kramer, 1983).

Ansolabehere, Meredith, and Snowberg question Kramer's sociotropic proposition using both cross-sectional and time series survey data (2014). They propose a theory of "mecro-economic voting" whereby voters use signals about the aggregate economy to evaluate its condition. The authors use data comprised of individual macroeconomic assessments as well as using aggregate time-series data. Based on individual level data, they find that if a group (demographic, age, education) realizes a higher unemployment rate, then they also report higher levels of unemployment for the national economy (Ansolabehere et. al, 2014). Therefore there may be reason to believe that respondents who receive an economic fear treatment will perceive economic conditions and the correlating policies in a different perspective. In general, Ansolabehere et. al propose that any work that disregards individual economic attitudes will be

biased. This balances Kramer's macro push with many other scholars' micro approach (Lewis-Beck, 1988, Kinder and Kiewiet, 1979, Hopkins, 2012, Bartels, 2013).

II. Looking Ahead: Modern Political Economy Research, Redistribution, and Hypotheses

Yet, this analysis moves beyond methodological debates. Namely, the literature reviewed above sets the stage: economic voting encompasses a debate between the rational, pocketbook voter, and the sociotropic voter in either a retrospective or prospective time period. The present analysis will not close the door on field encompassing theories, but some more recent studies add their own take on the debate, and inspire this research.

Using individual level American National Election Studies (ANES) data, Anderson, Duch, and Palmer examine how media exposure, political attitudes, and personal and socioeconomic experiences impact individuals' macroeconomic comprehension (2000). Their study concludes that citizens are more likely to use these assessors in times of economic downturn, and other factors than the government's economic record influence citizens' vote choice (Anderson et. al, 2000). Furthermore, they highlight individual level, rather than aggregated data, because individual level data specifically capture how the above variables impact vote choice. The present analysis benefits from this finding as it relies upon individual survey data to generalize the impact economic fear has on policy support. Additionally, the finding that individuals rely on outside sources during periods of distress provides evidence that an economic fear treatment could trigger a reaction to a policy that differs from an opinion under normal conditions.

Similarly, Hopkins (2012) looks at how individuals perceive economic conditions during periods of unequal growth. Hopkins updates conclusions about sociotropic voting from the 1970s and 1980s in light of income inequality. Using 1978-2010 Michigan Survey of Consumer Attitudes responses, he tests whether individuals vote on sociotropic evaluations of the economy, or whether these votes occur relative to the economic performance of the rich (Hopkins, 2012). Quite optimistically, compared to Anderson et. al, Hopkins concludes that "sociotropic voting based on national economic assessments has provided a pathway through which the poor's economic condition shapes American politics" (2000, 2012). He finds less wealthy individuals have not developed more negative opinions of their own situations simply because others earn more (Hopkins, 2012). Furthermore, for both the rich and poor, economic assessments consider the performance of all class levels, not just their own (Hopkins, 2012).

Hopkins' findings lend well to research on redistributive attitudes (2012). Focusing on major industrial countries outside of the United States, Cavaillé and Trump find that support for government income redistribution is statistically different from support for policies providing assistance to the poor (2014). And in concordance with Hopkins' analysis, Cavaillé and Trump find that income does not predict how individuals feel about redistributive policies (2012 and 2014). Furthermore, they demonstrate that attitudes toward redistribution vary based on whether the individual is thinking in the frame of a contributor or a recipient of assistance (Cavaillé and Trump, 2014). These findings, set in the sociotropic framework developed by previous research, contribute to the first hypothesis:

> **H1: Economic anxiety will lead respondents to increase support for social welfare policies where they would derive benefit (Affordable Care Act, welfare, student loan debt forgiveness); it will lead to decreased support for policies where assistance is provided to an out-group (immigration).**

Utilizing county-level data, Hansford and Gomez find a causal link between economic conditions in the year leading to the election and vote choice when there is no incumbent candidate (2015). They assume an incumbent clouds voters' perceptions because they have set definitions of who that candidate is (Hansford and Gomez, 2015). Yet, a nonincumbent from the same party has a greater opportunity of recognition without presidential performance assumptions (Hansford and Gomez, 2015). Additionally, while Hansford and Gomez, as well as research by Reeves and Gimpel, emphasize analyzing local data, the current analysis assumes those surveyed are more attuned to sociotropic conditions rather than local, pocketbook, considerations while responding (2015, 2012). This is because younger respondents are more transient and looking to enter the national job market, not just a local arena.

To analyze the impact of economic conditions on electoral choice, Woon (2012) conducted a laboratory experiment. Subjects played an incomplete information game multiple times, acting as both a voter and a politician. Woon finds a tendency for subjects to vote retrospectively: looking at a politician's general success in the past (2012). Subsequently, politicians in the game act in the best interest of the voters (Woon, 2012). Moreover, Woon employs the political psychology use of a heuristic to describe this retrospective behavior (2012). Accordingly, retrospective-sociotropic perspectives act as a shortcut for voters attempting to maximize utility through voting (Woon 2012). This retrospective assumption justifies the

perceptions survey respondents have when forming policy opinions. Woon's findings imply that rational politicians account for the preferences of the voter (2012).

Also in the experimental realm, Trump ran three experiments testing how public opinion on income differentials is affected by income inequality itself (2016). She finds that opinions on income inequality in the United States face influence from individuals' experience with poverty and their personal knowledge about national income inequality (Trump, 2016). Effectively, her research shows that greater levels of inequality actually increase tolerance for inequality (Trump, 2016). These findings contrast the rationality assumptions underlying much of the economic-grounded literature (Downs, 1953 and Key, 1966). Trump's "adjustment hypothesis" instead posits that the human response to targeted inequality is more fluid and subject to non-traditional behavior when describing where demand is derived from (2016).

The recent research confirming sociotropic perceptions of economic success along with the development of the adjustment hypothesis, leads to:

> **H2: Contrary to H1, for respondents earning less than $50,000 over the next year, an economic fear treatment will decrease support for all policies (Affordable Care Act, welfare, student loan debt forgiveness, immigration).**

Two other aspects of the economic voting literature precede this analysis. Research on emotions and voting decisions seek to understand how varying personal and societal factors impact an individual's vote choice. The present piece fits this domain, as it seeks to understand not only how economic changes are perceived (sociotropically is the current assumption), but also how economic changes subsequently translate into support for or against a specific policy.

Banks analyzes the anger that rippled through the U.S. after the 2008 recession (2016). Specifically, he asks whether white anger causes decreased support for policies stereotypically thought to benefit minorities (Banks, 2016). Working in the political psychology realm, Banks defines an anger experience as that of personal threat where the individual knows who is responsible (2016). The present research will do the same with a focus on economic induced fear. Banks experimented with 180 subjects; after inducing an anger treatment, he finds that whites who score high on the "ethnocentric scale" – those who are very closely associated with their in-group – are more likely to oppose racial immigration policies than are the control group who are equally ethnocentric but are not exposed to the anger treatment (2016).

Interestingly, Banks finds that for a small subset of whites who score low ethnocentrically, that is they relate with out-groups more than their white in-group, the anger

treatment actually creates greater support for policies thought to benefit minorities (2016). Traditionally, economic voting literature has not concerned itself with such details, but the relatively small and personal scale of this research demands attention. Therefore, if the present research finds that whites that undergo economic fear support certain policies at the same rate as minorities, some of the explanation may be due to ethnocentric identification.

Similar to Banks, three additional pieces question American's opinions on out-groups or responsiveness to economic changes, and lend well to the design of the present study. Brader, Valentino, and Suhay use experimental methods and find that news pieces about the costs of Latino immigration create significantly more opposition than those about European immigrants (Brader et. al, 2008). Therefore using newspaper articles as treatments can trigger reactions from subjects. Work by Simonovitz relies on fictional reports from expert economists and tests how presidential approval is impacted by these expert testimonies (2015). He finds that a reported 10 percent improvement in economic conditions resulted in a 5 percent increase in respondent presidential approval (2015). Lastly, Zaller and Feldman use ANES data and posit that respondents are actually quite vulnerable to short-term opinions or thoughts that are "on top of their head." (1992). This finding provides additional support for experimental survey methodology, as using a treatment can induce a feelings that may change policy opinions.

In addition, and preceding H3, work by Bloom and Price demonstrate that voters are quite responsive to changes in unemployment and subsequent short-term changes in income (1975). Subsequently, Kiewiet finds that voters are conscientious of unemployment and hold politicians responsible for poor economic conditions (1981). Furthermore, Kiewiet's regression analysis reveals that individuals are likely to punish politicians for rising unemployment even if they were not directly impacted (1981). This lends support for unemployment's sociotropic impact. but it also demonstrates that voters understand the link between unemployment and political power. This proves logical because unemployment is a relatively simple concept that individuals can relate with regardless of their personal experience. On the contrary, very little research questions how individuals translate GDP changes into votes or policy opinions. GDP remains a more abstract concept used as a broad indicator of economic growth; unemployment appears to be more a better indicator both in the literature and by the fact that individuals gain experience with unemployment (locally) without seeking third party information.

The findings on the effectiveness of newspaper article treatments, individual's response to short term stimuli, and unemployment's significant effect on voter's preferences leads to H3 (Banks, 2016, Brader et. al, 2008, Simonovitz, 2015, Zaller and Feldman, 1992, Bloom and Price, 1975, Kiewiet 1981):

> **H3 (2015): For the Mechanical Turk sample there will be a more pronounced response for the unemployment treatment than for the GDP treatment (anti-immigration, pro-Affordable Care Act, pro-welfare, pro-student loan debt forgiveness).**

In summary, the economic voting literature is sweeping, evolving, and questioning how the changing national economy impacts voters' behavior. Early work formalized the responsibility and actions of rational voters. The literature during the 1970s and 1980s takes advantage of databases and more advanced statistical techniques to question the relevance of sociotropic versus pocketbook voting. More recently, mass survey techniques help scholars administer treatments and better understand how different aspects of the changing economy impact vote choice. A large majority of this research has focused on the national level. This research follows that trend, but instead of evaluating choices for or against candidates, the present analysis evaluates impacts on different policies. This research aims to expand on recent immigration conclusions by also including welfare, student loan debt forgiveness, and universal healthcare as policies under purview. Employing an economic fear treatment will allow for a greater comprehension of how similar shocks impact voters' opinions of tangible policies, rather just opinions of politicians' performance.

Below is a summation of the hypotheses to be tested:

Hypothesis 1:	H1: Economic anxiety will lead respondents to increase support for social welfare policies (Affordable Care Act, Welfare, Student Loan Debt Forgiveness) where they would derive benefit; it will lad to decreased support for policies where assistance is provided to an outgroup (immigration).
Hypothesis 2:	Contrary to H1, for respondents earning less than $50,000 over the next year, an economic fear treatment will decrease support for all policies (Affordable Care Act, Welfare, Student Loan Debt Forgiveness, Immigration).
Hypothesis 3:	For the Mechanical Turk sample there will be a more pronounced response for the unemployment treatment than for the GDP treatment (anti-immigration, pro-Affordable Care Act, pro-welfare, pro-student loan debt forgiveness).

The next section describes the research design and survey methods employed as well as special considerations due to the data used in this procedure.

Research Design

This research employs two survey experiments to test causal mechanisms behind policy support. In particular, the experimental design allows for analysis of whether economic fear impacts policy preferences. An experimental model allows for manipulating economic fear through random subject assignment to treatments that describe different aspects of the economy in a variety of conditions. The policies in question are immigration, The Affordable Care Act, welfare, student loan debt forgiveness, and a foreign policy commitment. Questioning the impact on policy renders this research somewhat unique in the economic voting field, as most previous work focuses almost solely on the impact of economic conditions on support for or against an incumbent candidate or party (Lewis-Beck, Jacoby, Norpoth, Weisberg, 2011, and Abramowitz, 2016[1]). An experimental approach provides results that inform what kinds of economic fear have causal impacts on specific public policies.

The causal power of economic fear proves important to explore because of its salience in society in general, but it is especially pertinent in wake of the most recent presidential election. With the election of Donald Trump, the status of the U.S. and global economy is largely in question. President Trump's campaign rhetoric involved significantly controversial policies apt to change global markets and the direction of capitalism and social welfare in the U.S.

To gauge this fear from a more targeted response group, the first survey experiment was delivered solely to college undergraduate college students. The survey was randomly administered to participants recruited by class list serves, Facebook posts, and word of mouth.[2] All respondents took the survey online and had no identifying characteristics in their answers. Respondents were randomly given a control or treatment version of the survey. This experiment subscribes to techniques commonly used by political scientists to create a stimulus: newspaper articles (Einstein and Glick, 2014, Simonivits, 2015, Alt and Lassen, 2014, Brader et. al, 2008). For the undergraduate survey, the newspaper articles were renditions of Boston University's *Daily Free Press*. The *Daily Free Press* is an on-campus newspaper distributed in most of the main buildings. It is easily accessible, its articles are available online, and students on campus can refer to it for relevant local, national, and global news written by undergraduates. Both the

[1] Time For Change Model

[2] See Perkins for comprehensive techniques and strategies used to recruit undergraduate survey respondents (2011).

control and treatment groups received newspaper articles identical to the online format of *Daily Free Press* articles. The control stimulus is an article titled "Looking Ahead: Job Market as Expected for Upcoming Grads" (reproduced below and in larger size in the appendix). The article describes fictional undergraduate job market statistics and two fictional accounts from students entering the job market. The article simply describes this situation as status quo. The control article provides no stimulus to capture responses to the policies under normal conditions.

Contrarily, the treatment stimulus was titled, "Should you Be Concerned? Fear on Campus Imminent as Jobs Disappear" (reproduced below). The treatment refers to the same statistics as the control but puts them in a negative light. The article (fictionally) reports only 25 percent of 2016 college graduates obtaining adequate employment. In addition, the treatment provides the same two personal accounts as the control article, but both students are struggling despite having good GPAs, employable majors and backgrounds, and or having applied to many jobs. Lastly, like the control article, the treatment describes an on campus survey whereby 68 percent of respondents were "worried about their ability to find adequate work in a rapidly changing economy." Overall the treatment stimulus aims to create an economic fear response for the undergraduate student respondents. The treatment mirrors the control article except for the facts and photo. The treatment employs no references to politics or policies.

FEATURES, INBUSINESS

Looking Ahead: Job Market as Expected for Upcoming Grads

by Sam Korvinich

It is never surprising to hear that your friends are concerned about where they are going to end up after college. For many, that anxiety starts on the first day of school freshman year. In many cases this fear is unnecessary people who graduate from top ranked schools like Boston University generally land on their feet. This seems to be the case for upcoming graduates.

One key economic indicator that provides insight to this question is the percent of college students who report being adequately employed five months after graduation. Nationwide polling delivers expected results on this front: 80 percent of 2016 college graduates report obtaining employment that met their expectations given their degree.

Over the past 6 years (after the economic decline) these numbers have grown from 60 percent in 2010 to around 80 percent in 2012 onwards. It seems that upcoming graduates' concerns on employment are largely baseless.

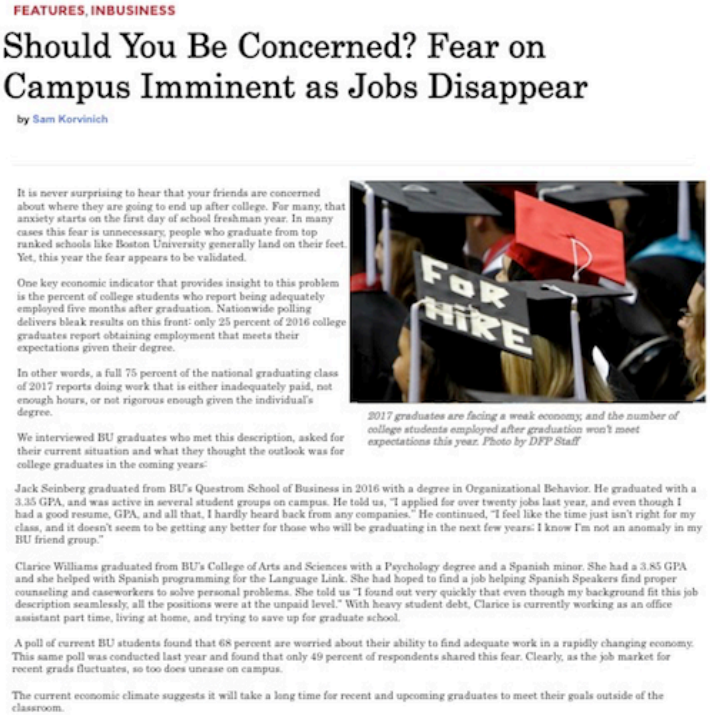
We interviewed BU recent graduates, asked about their employment current situation and what they thought the outlook was for college graduates in the coming years:

2017 graduates are facing a "normal" economy, and the number of college students employed after graduation has met expectations. Photo by DFP Staff

Jack Seinberg graduated from BU's Questrom School of Business in 2016 with a degree in Organizational Behavior. He graduated with a 3.35 GPA, and was active in several student groups on campus. He told us, "I applied for over twenty jobs last year, and I heard back from about half of them." He continued, "I feel like the economy is fine for graduates…most people I know only applied to 3 or 4 jobs and they are doing just fine."

Clarice Williams graduated from BU's College of Arts and Sciences with a Psychology degree and a Spanish minor. She had a 3.85 GPA and helped Spanish programming for the Language Link. She hoped to find a job helping Spanish Speakers find proper counseling and caseworkers to solve personal problems. She told us "with my advisor's help I found a position at a Boston Medical Center affiliate: I'm quite satisfied with my work life." Although Clarice has student debt, she said, "as long as you stay on top of your loan payments, everything should go as planned."

With the economy meeting what one BU Economics professor described as "normal conditions," the state of the job search for 2017 graduates and beyond seems to be normal as well.



FEATURES, INBUSINESS

Should You Be Concerned? Fear on Campus Imminent as Jobs Disappear

by Sam Korvinich

It is never surprising to hear that your friends are concerned about where they are going to end up after college. For many, that anxiety starts on the first day of school freshman year. In many cases this fear is unnecessary; people who graduate from top ranked schools like Boston University generally land on their feet. Yet, this year the fear appears to be validated.

One key economic indicator that provides insight to this problem is the percent of college students who report being adequately employed five months after graduation. Nationwide polling delivers bleak results on this front: only 25 percent of 2016 college graduates report obtaining employment that meets their expectations given their degree.

In other words, a full 75 percent of the national graduating class of 2017 reports doing work that is either inadequately paid, not enough hours, or not rigorous enough given the individual's degree.

We interviewed BU graduates who met this description, asked for their current situation and what they thought the outlook was for college graduates in the coming years:

2017 graduates are facing a weak economy, and the number of college students employed after graduation won't meet expectations this year. Photo by DFP Staff

Jack Seinberg graduated from BU's Questrom School of Business in 2016 with a degree in Organizational Behavior. He graduated with a 3.35 GPA, and was active in several student groups on campus. He told us, "I applied for over twenty jobs last year, and even though I had a good resume, GPA, and all that, I hardly heard back from any companies." He continued, "I feel like the time just isn't right for my class, and it doesn't seem to be getting any better for those who will be graduating in the next few years: I know I'm not an anomaly in my BU friend group."

Clarice Williams graduated from BU's College of Arts and Sciences with a Psychology degree and a Spanish minor. She had a 3.85 GPA and she helped with Spanish programming for the Language Link. She had hoped to find a job helping Spanish Speakers find proper counseling and caseworkers to solve personal problems. She told us "I found out very quickly that even though my background fit this job description seamlessly, all the positions were at the unpaid level." With heavy student debt, Clarice is currently working as an office assistant part time, living at home, and trying to save up for graduate school.

A poll of current BU students found that 68 percent are worried about their ability to find adequate work in a rapidly changing economy. This same poll was conducted last year and found that only 49 percent of respondents shared this fear. Clearly, as the job market for recent grads fluctuates, so too does unease on campus.

The current economic climate suggests it will take a long time for recent and upcoming graduates to meet their goals outside of the classroom.

One concern is whether the stimulus has relevance to students who are planning on attending graduate school directly after college. This analysis assumes students attending graduate school still have career goals in mind, and that the negative economic conditions described will still have tangible results on these students. This relies on the sociotropic perspective: those students attending graduate school will read the article with concerns about the ability of lots of college graduates to find employment, not just themselves. The treatment's statistics apply to the respondent and their immediate cohort, but also to their friends at universities across the country. The treatment intends to impact the respondent's view of economic conditions at large and question the inherent consequences. Relying on the sociotropic perspective is appropriate because of the tight-knit network most students have through social media and cellular communication. Therefore, the stimulus applies to individuals pursuing graduate school as well as those who are hoping to enter the job market after graduation.

Regarding newspaper design decisions, the *Daily Free Press* was chosen instead of national or international news sources to have specific references to student related economic issues. In addition, the *Daily Free Press* does not have a strict liberal or conservative connotation unlike some national sources like the *New York Times* or *Wall Street Journal*. This is essential because this experiment seeks to have the economic treatment explain opinions on policy rather

than innate political biases. This goal is derived from Alt and Lassen's work on the Danish population (2014). They utilize a survey experiment among other methods (population level data and multivariate regression) to reject the theory that political party endogeneity controls sociotropic economic opinions (Alt and Lassen, 2014). Therefore, the present work aims to uphold their endogeneity finding by ensuring all aspects of the stimulus are non-political. In addition, at Boston University, the *Daily Free Press* is not the main news source for the majority for students. This is important because it is possible that a respondent could recognize the fictitious nature of the article. For that reason, neither the control or treatment articles have dates. Regardless, even if an individual recognizes the deception used in the articles, they will receive stimulus because the statistics and stories relate directly to their wellbeing after graduation.

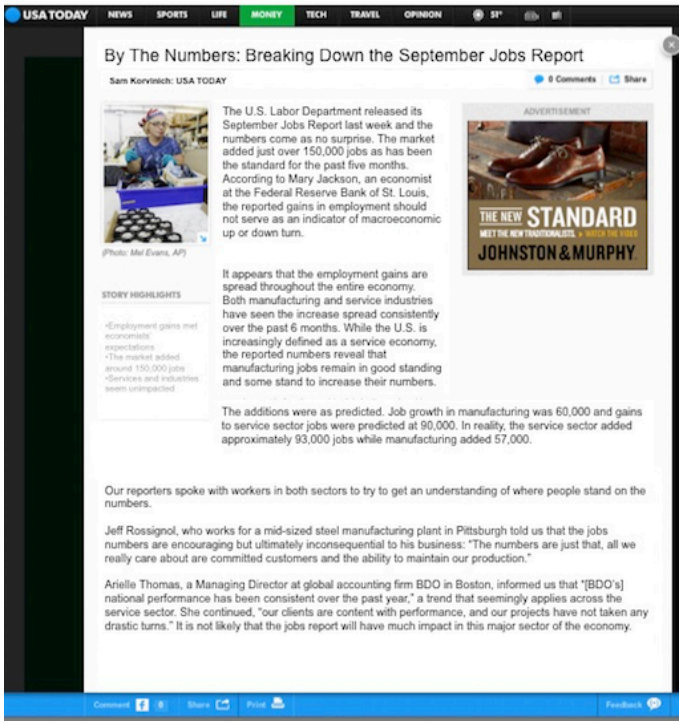
Most importantly, newspaper articles provide an important source of external validity to the study results. Unlike vignettes and other artificial manipulations used to mask treatments, a newspaper article from a reputable source the respondent relates with is a more accurate representation of a natural experiment. A newspaper article treatment aims to measure the response individuals have when they read an article, get an update on their phone, or catch a headline on television. These instances occur multiple times per day for most individuals and therefore are a relevant way to distribute information to respondents. Yet, this treatment technique is not without its flaws. While the articles provide ample external validity, there is a running risk that the results do not stem from the treatment article alone (Einstein and Glick, 2014). In fact, this weakness is likely exaggerated at present because of the political climate in the United States. Individuals remain heightened to the initiation of the Trump Administration and there is a very real possibility that the measured results are not wholly due to the treatment. Yet, this internal validity weakness proves worthwhile for the external validity gains. Moreover, because the treatment articles are apolitical, individuals are less likely to base their responses on political feelings rather than the stimuli presented. In addition, the internal validity loss due to the Trump Administration's pervasiveness does not totally harm the results. Due to heightened economic anxiety, respondents may be more prone to grasp the relevance of the treatment and apply sociotropic responses. Lastly, due to the relative homogeneity of the student group, it is appropriate to assume that the economic fear stimulus is applicable to this demographic at large. This presents one advantage of using a well-defined group such as "undergraduate college students" rather than a more variable group such as "voting age U.S. citizens." The

generalizability afforded by the undergraduate sample provides a valid and worthwhile group to test the present hypotheses and offers a unique target group to understand the results.

In addition to the undergraduate survey, this study benefits from a wider pool of respondents. A second economic fear experiment was conducted using Amazon's Mechanical Turk (MTurk). Three studies by Berinsky et. al., Boas, Christenson, and Glick and Leeper and Mullinix found that MTurk samples do an appropriate job replicating experimental findings (2012, 2013, 2014). Three different methods were compared when deciding how to field survey respondents. The first option is the most costly for a large sample: using a professional surveying firm to field the survey. While this provides a representative sample, it comes at a cost beyond the scope of this project. Next is relying on a convenience sample like MTurkers or purchasing Facebook ads to attract individuals to the survey. Amazon MTurk is chosen here instead of Facebook advertisements for a few reasons. Firstly, MTurk responses are less costly than Facebook responses (Boas, Christenson, and Glick, 2013). While Boas, Christenson, and Glick find that MTurk and Facebook are about equally biased away from results in probability samples, the lower cost of MTurk sampling gives it the upper hand in the present study (2013). Additionally, MTurk response speed and the ability to pay without exchanging identifying information make it a clear choice for a convenience survey targeting over 500 responses.

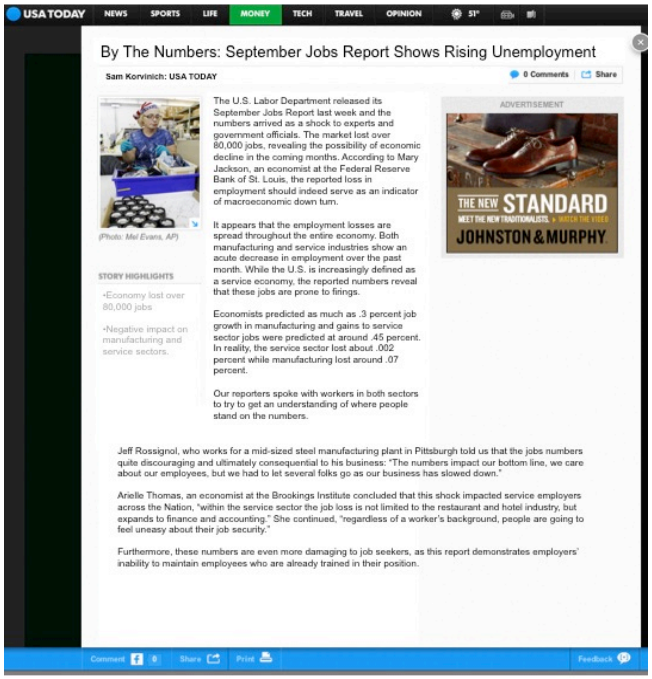
While just applying the treatment to the undergraduate sample would likely be an interesting standalone test, using an MTurk sample allows for more data collection, a slightly more age-diverse sample, and different treatments. It allows for a more diverse understanding of how economic fear impacts opinions on public policies and is intended to enhance external validity. Furthermore, utilizing multiple treatments ensures that different orientations of economic fear are derived and their resulting impacts on public policy opinions can be compared. The MTurk survey consisted of a control and two treatment stimuli. To avoid political connotation, the newspaper articles are displayed as *USA Today* articles. There are no dates on the articles, but both the control and first treatment article refer to "September." Each article is kept fairly short for two purposes. Having a shorter article is beneficial so that respondents pay complete attention to the content and do not have too much information to comprehend in a short period of time. Secondly, having a shorter piece ensures respondents can easily recall the information when responding to the policy questions.

The control article is titled, “By the Numbers: Breaking Down the September Jobs Report.” The article serves as a fact-driven report on the U.S. Labor Department jobs report with fictional numbers. The control article demonstrates neither economic up nor downturn. The intent is that most readers will read the article and feel no different about the economic stability of the country. The control group may feel more informed about how the jobs report is measured, how many jobs were added and in what sectors, but there should be no fear or un-normal emotions after reading the article.



The unemployment treatment article features a poor jobs report and rising unemployment. Its title reads, “By the Numbers: September Jobs Report Shows Rising Unemployment.” The treatment describes job loss and imminent economic decline. It features descriptions and affirmations by a fictional Federal Reserve economist, Brookings Institute economist, and a negative anecdote from a fictional steel manufacturing employee. This treatment benefits monthly Bureau of Labor Statistics jobs reports. Since the statistics change relatively frequently, respondents are less likely to recognize the deception in the treatment. If respondents recognize the deception, the tone and facts reported in the stimulus is likely to create economic fear. In addition, the treatment will create the economic fear stimulus regardless of what form of employment respondents have. Unlike the undergraduate treatment, the article is informative and does not target a specific demographic. Writing about the economy at large

guides respondents to assess the policy questions in regard to economic fear they feel for the country at large rather than potential personal unease. Using the jobs report to evoke economic fear followed the assumption that individuals respond to unemployment as one of the most tangible indicators of the national economy (Eisenberg and Ketcham, 2004).[3]

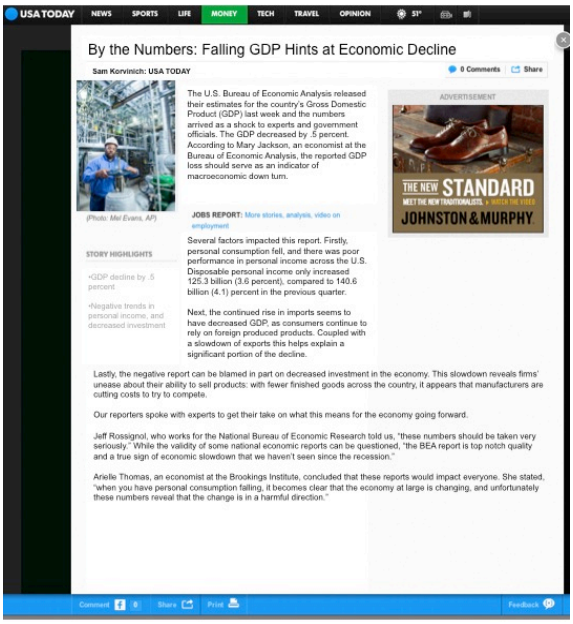


The second MTurk experimental treatment's article reads, "By the Numbers: Falling GDP Hints at Economic Decline." The main stimulus is the fictional fact that "GDP decreased by .5 percent." Similar to the unemployment MTurk treatment, there are economist references in order to support the facts listed in the article. The decline in GDP is explained by parts of its whole: disposable personal income, net exports, and investment. Using a GDP treatment is beneficial for two reasons: firstly, there is a chance that the unemployment treatment has no impact on respondent's opinions of the policies in question, and using a GDP decrease should provide a stimulus if unemployment is ineffective. Secondly, it allows for a comprehension of whether different types of economic fear impact policy opinions similarly. The concepts used to describe the GDP decrease are easy to comprehend and are not described in a manner to confuse respondents (Cohen, 2016).

The article is informative, and it does not take a tone other than describing the negative impact of decreased GDP. Respondents will understand that these factors are all in decline and

[3] According to their 2004 study, each one-point increase in unemployment over a year correlates with a 9.2 percentage point decline in incumbent vote share.

associate that to the status of the country as a whole. A GDP treatment accords to the sociotropic perspective. Respondents will be prone to think about the performance of the national economy rather than just their own personal economic angst. This distinction primes individuals to think of larger implications of social policies. The GDP treatment is valid regardless of the respondent's profession and employment status. GDP impacts all individuals within a country: it drives economic trends and helps companies forecast their business strategies. It is also at the heart of the macroeconomy: as the GDP moves so does the nation.



Survey Response Strategies

The survey consists of two parts for both the undergraduate and MTurk pools. First, respondents were randomly assigned either a control or treatment article, and after reading the article, respondents answered several survey questions. All surveys were administered online. This eliminates surveyor bias. Eliminating this bias is especially important in the undergraduate pool where the survey issuer could potentially know the respondent. MTurk and undergraduate respondents answered the same survey questions.[4] The survey headings asks respondents to, "Please rate how strongly you agree/disagree with each of the following statements." For the five substantive questions respondents have a choice from a close ended four-point scale: strongly agree, somewhat agree, somewhat disagree, and strongly disagree.

[4] See the appendix for a full outline of the survey and the questions worded as per the online surveys.

After reading the randomly assigned control or treatment article, respondents answer a series of five policy based questions and six demographic questions. The first policy question asks respondents to what degree they agree with the statement, "The United States should allow immigrants to enter the country legally and should provide means for immigrants to have quality education, jobs, and a path to citizenship." This question gauges the respondents' opinion on immigration. Comparing the control and treatment groups' response explores the impact of an economic fear treatment on immigration policy. Following immigration is a similar question regarding the Affordable Care Act (ACA).

Testing the impact of the ACA will help determine how Americans respond to large-reaching policies in situations of economic angst. Additionally, this test proves worthwhile because health insurance represents an ever-increasing portion of the American budget (both corporate and private) (Bureau of Labor Statistics, 2016). With rising premiums and technological progress constantly driving up the costs of healthcare, the treatment should stimulate accurate concern about an individual's ability to pay for insurance or the chance that their employer may make their insurance opportunities more expensive. Economic fear acts as an appropriate prime for this policy because of its controversial nature, and although there has been much confusion over the policy, it is nearly synonymous with questions about spending, costs, and individual economic impacts. Yet, individuals should view this sociotropically because of the policy's intention to provide universal care.

Following the ACA question, respondents are asked to provide their opinion on welfare. The question asks respondents whether they agree that welfare in the U.S. is too large. This question is similar to the ACA question, but it differs because welfare is not a novel policy, its existence is not up for debate in congress, and individuals do not face a tax penalty from its existence. Like immigration, welfare is a staple policy in the U.S.; the existence of some sort of welfare, like the existence of immigration law, is necessary for social stability and some of the most important boundaries in the country. Testing the response to welfare under economic fear is also contentious. Party identification hypotheses place conservatives against expanding welfare, but it is yet to be seen whether economic fear can shift these preferences.

Following the welfare question, respondents were asked whether they agree that the federal government does not provide ample opportunity for student loan debt forgiveness and that college students should have more chances to have their debt forgiven. This question applies

directly to the undergraduate sample, but all respondents regardless of their education status can effectively answer it. Whether economic fear does change respondent's opinions on student loan debt policy is relevant both to policymakers and the general public. During recessions individuals may be less likely to pursue college degrees, but a better-educated workforce could help the economy prevent further economic decline. To assist this problem, greater government loan assistance could encourage individuals to pursue higher education. Yet, during the situations presented in the economic fear treatments, individuals have incentive to doubt the government's ability to provide greater assistance. This question therefore combines different aspects of policies that provide assistance, but the responses could be predictably different as the benefits of student loan forgiveness are more evenly spread across society. Lastly, to capture general differences for the samples, a foreign policy question was asked regarding the U.S.' involvement in the Syrian civil war. There should not be significant differences between the treatment and control responses to this question, as sociotropic concerns about the national economy and sociotropic views of an economy under normal conditions will not change an individual's understanding of the situation in Syria. Large differences in responses between the control and treatment groups could be evidence of sampling error or an unintended treatment effect.

In order to gain valuable information for analysis without priming individuals about politics, race, or other sensitive topics, respondents answered demographic questions after responding to the policy questions. The survey collected a respondent's age, gender, race, education level, citizenship status, expected pre-tax income, and party identification. All of these differences prove necessary for understanding the causal effects on different groups. Yet, it is important to point out that the diversity in respondent groups is predictably weak. Boston University's undergraduate student body is 40 percent white and only 18 percent Hispanic or black (Boston University Admissions, 2016). In addition, nearly 25 percent of undergraduates are international students. Therefore, the undergraduate sample is likely skewed toward white respondents and international students. These groups tend to have above average household incomes. As per Christenson, Glick, and Boas the MTurk sample also tends to be whiter (2013). These biases were considered, but as previously described; timing and location limitations make Boston University undergraduates the most viable undergraduate sample and MTurk's benefits secured it as the method to test the unemployment and GDP treatments on a broader sample. Undergraduate respondents were entered into a lottery to win Amazon gift cards. MTurk

respondents were compensated 40 cents for participation. The MTurk HIT was available to respondents over 18 in the United States who had at least a 95% approval rating (Christenson, Glick, Boas 2013.) Only one round of surveys were administered over three weeks.

Data Analysis

I. Descriptive Statistics

After distribution, 258 Boston University students and 889 MTurk respondents completed the survey. For the Boston University survey, the average age was 18-25 years old. Regarding the race of the respondents, 62.5 percent of the BU respondents were white, 20.3 percent were Asian, 12.1 percent were Hispanic, and less than 2 percent were African American. A whole 92.2 percent of BU respondents are U.S. citizens. Regarding gender, 67.8 percent of the BU sample was female, and all BU respondents were pursuing higher education. The income distribution was skewed predictably low, with 89.4 percent of BU respondents reporting a pre tax income less than $50,000, 75.3 percent of which is below $26,000. Lastly, party identification was also skewed in a predictable direction, with 71.8 percent of BU respondents at least leaning Democrat, and 21.2 percent of respondents identifying as Independent. The BU sample largely represents the average college or university in the United States: majority white, female, Democratic, U.S. citizens, with low personal income. More specifically, this sample is quite representative of Boston University, yet it lacks enough racial and international diversity to be wholly representative.[5]

For the MTurk sample, the average age was between 30-40 years old, and 99 percent of the sample was less than 70 years old. Regarding race, 77.3 percent of respondents were white, 10.4 percent were Asian, 16.1 percent were African American, and about 6 percent were Hispanic. A commanding majority of 98.5 percent of respondents were U.S. citizens, and the sample was majority male (59.6 percent). Less than 1 percent of respondents had less than a college degree, 29.6 percent were pursuing a degree, and 43.98 had a bachelor's degree. Therefore, the sample is quite well educated. Regarding pre tax income, 28.5 percent of the sample earned less than $26,000, 35 percent earned between $26,000 and $50,000 and 24 percent earned between $51,000 and $75,000. About 13 percent of the sample reported earning more than $75,000. Regarding party identification, 52.6 percent of the sample identified as at least

[5] See the "Descriptive Statistics" section in the appendix for full numerical results.

leaning Democrat. Independents represent 23.7 percent of the sample and individuals who at least lean Republican are 23.7 percent of the sample. Therefore the MTurk sample was about as representative as expected given the findings by Boas, Christenson and Glick (2013).[6]

II. Testing Hypothesis 1

H1 questions whether the treatment causes significant differences in support for policies compared to the control group. Specifically, H1 predicts the Affordable Care Act, welfare, and student loan debt forgiveness would receive increased support relative to the control group. Policies where an outgroup receives assistance, measured by immigration in the present study, will receive less support. Using both Chi-Square (see Figure 1,2 and 3 in appendix) and ordinary least square regression analysis, the significant finding for both the BU and MTurk sample is that receiving an economic anxiety treatment indeed increases economic pessimism. As demonstrated in Table 1, there is a statistically significant difference between the control and treatment groups regarding economic pessimism for the MTurk sample. This result is more ambiguous for the BU sample as a Chi-Square test of significance (see Figure 3) demonstrates no significant difference in pessimism between the two groups, but a regression test (see Table 1) of the economic outlook variable against a dummy variable for the treatment group reveals a statistically significant difference between the two groups. In fact, the regression for the BU sample demonstrates that the treatment alone resulted in a significant .21 point inclination toward economic pessimism.

[6] See the "Descriptive Statistics" section in the appendix for full numerical results.

Table 1. OLS Regressions: Testing the Treatment Effect

Unemployment Treatment	Coefficient	Standard Error
Economic Pessimism	0.60	(0.06)***
Immigration	0.07	(0.08)
Affordable Care Act	-0.00	(0.09)
Welfare	0.08	(0.09)
Debt Forgiveness	-0.05	(0.08)
N: 614		
GDP Treatment		
Economic Pessimism	0.40	(0.06)***
Immigration	0.05	(0.08)
Affordable Care Act	0.00	(0.09)
Welfare	-0.02	(0.09)
Debt Forgiveness	0.01	(0.08)
N: 564		
BU Treatment		
Economic Pessimism	0.21	(0.08)**
Immigration	-0.00	(0.10)
Affordable Care Act	0.01	(0.11)
Welfare	0.02	(0.11)
Debt Forgiveness	-0.04	(0.11)
N: 257		
R^2 : 0.02		

* p<.10
** p<.05
*** p<.01 (two-tailed tests)

Table 1 further confirms the effectiveness of the treatment on economic opinions: the unemployment treatment had a 0.60 increase in respondent pessimism regarding the economy. The GDP treatment increased pessimism by 0.40 points. Clearly, using an economic anxiety treatment decreases a respondent's likelihood of viewing the economy in a positive light, all else equal. Yet, this does not prove H1; for H1 questions not how opinions on the economy change after receiving the stimulus, but how respondent's opinions on policies are altered under situations of economic anxiety.

Performing a series of Chi-Square (see appendix) and regression tests to parse out differences between the control and treatment group responses reveals that for all policies in all three control and treatment groups there are no statistically significant differences. H1 predicted that under regression analysis, the treatment group should have a positive coefficient for immigration (disagreeing that their should be equal opportunity for immigrants), a negative sign for healthcare, a positive sign for welfare (because the survey question placed the policy in a

negative light), and a negative sign for student debt forgiveness (see appendix for survey wording and response options). In concordance with H1, the GDP and unemployment treatment groups have positive signs for immigration, while the BU Treatment has a negative coefficient. Regarding healthcare, the unemployment treatment group corresponded with H1, while the BU treatment group and the GDP treatment group had a negative sign. While testing welfare, the GDP treatment had a negative sign, but both the unemployment and BU Treatment groups had positive coefficients as predicted by H1. Lastly for college debt forgiveness, The GDP treatment group was contrary to H1 with a positive sign while the other two treatments had negative coefficients. Yet, since these results are not significantly different from zero, teasing out why a contrast exists between the treatment groups proves nonsensical. In addition, respondents were asked a nonrelated question regarding U.S. involvement in the Syrian Civil War. No significant differences between the control and treatment group were found on this question either. Overall, H1 can be overturned due to statistical insignificance and uncoordinated patterns between the treatment groups. An economic anxiety treatment neither seems to have the power to change policy opinions in general nor in an anticipated direction.

III. Testing Hypothesis 2

H2 explores whether treatment effects differ by respondent income. Rather than making a simple differential between the control and treatment groups, H2 argues that for individuals making less than $50,000 (as measured by reported pre-tax income), an economic anxiety stimulus will decrease support for all policies. For MTurk respondents, 63 percent of respondents reported a pre tax income below $50,000. Therefore the income distribution is quite even for the randomized survey. In the BU student group, 89 percent of respondents reported a pre tax income below $50,000. This is not surprising, as most undergraduates are not working full time positions that would provide a high-income level. The MTurk sample proves to have a greater income spread than the BU sample and will be more likely to have significant differences between the two groups.

For each of the three treatment groups, testing the treatment effects based on income relied on ordinary least squared regressions. These interaction regressions used the policies and economic optimism as the dependent variables. Therefore the regressions measure the treatment

effect on the two different income groups: those below $50,000 (low income) and those above the threshold (high income). These results are reported in Table 2, 3, and 4 below.

Table 2. OLS Treatment Effect by Income Level

Unemployment Treatment **N: 614**	Low Income	High Income
Economic Pessimism	0.65 (0.08)***	0.51 (0.10)***
Immigration	0.20 (0.10)**	-0.15 (0.13)
Healthcare	-0.00 (0.11)	0.02 (0.15)
Welfare	-0.01 (0.10)	0.24 (0.15)*
Debt	-0.11 (0.09)	0.05 (0.15)

Table 3.

GDP Treatment **N: 564**	Low Income	High Income
Economic Pessimism	0.46 (0.08)***	0.32 (0.10)***
Immigration	0.16 (0.10)	-0.13 (0.13)
Healthcare	0.03 (0.12)	-0.06 (0.16)
Welfare	-0.11 (0.11)	0.16 (0.15)
Debt	-0.10 (0.10)	0.17 (0.14)

Table 4.

BU Treatment **N: 257**	Low Income	High Income
Economic Pessimism	0.22 (0.10)**	0.44 (0.33)
Immigration	-0.01 (0.11)	-0.02 (0.36)
Healthcare	0.05 (0.12)	-0.30 (0.36)
Welfare	0.03 (0.12)	-0.08 (0.33)
Debt	-0.05 (0.11)	-0.17 (0.34)

*10% significance **5% significance ***1% significance

Looking at economic outlook for the BU sample, Table 4 reveals that the treatment effect was only significant on the low-income respondents. Those with an expected income below $50,000 were 0.22 points more likely to view the economy unfavorably. While insignificant, higher income respondents were also more likely to view the economy negatively upon receiving the treatment. This does little to test H2, but does accord with the finding that the treatment shapes sociotropic macroeconomic opinions negatively.

Next, performing the analysis with immigration as the dependent variable returns no statistically significant results with the BU sample. Yet, contrasting H2, the coefficient for low income respondents is negative, thus demonstrating that they are more likely to agree that the U.S. should continue to provide pathways for legal immigration and immigrant equality. Additionally (and still insignificant), Table 4 demonstrates that more wealthy respondents are also more likely to agree with more liberal immigration policy. Therefore, the treatment's impact on immigration, while noisy, does not concur with H2.

As with immigration, the results for the Affordable Care Act are quite noisy with no significant results in the BU sample. Table 4 demonstrates that the treatment effect on less wealthy respondents creates a tendency to oppose the ACA. While insignificant, the sign of the treatment's coefficient provides weak support for H2. While also insignificant, the treatment's impact on higher income respondents pushes respondents to support the ACA.

Similar to the two previous policies, the results for welfare prove insignificant in the BU sample. While insignificant, the results provide evidence against H2, as the treatment's impact on lower income respondent increased support for liberal immigration policies. Upon receiving the treatment, higher income respondents were more likely to agree that welfare opportunities in the U.S. are too expansive. Additionally, as Table 4 demonstrates, there are no significant treatment effects for student loan debt forgiveness. Yet, the results also contrast H2: both low income and high-income respondents are more likely to agree that the U.S. should expand opportunities for debt forgiveness after receiving the treatment. Generally, the treatment effect in the BU sample appears to have no significant impact on respondent's policy opinions, regardless of the respondent's income level. Therefore, in the BU sample, low-income respondents are not more likely to oppose all policies under situations of economic fear, and H2 is overturned.

Looking at the MTurk data, the results testing H2 prove nearly as insignificant as the BU data. First, focusing on the unemployment treatment group, Table 2 reveals with 99 percent

significance that for low-income respondents the unemployment treatment increases macroeconomic pessimism by .65 points. Similarly, the unemployment treatment increased macroeconomic pessimism for high-income respondents by .51 points. For the GDP treatment group (Table 3), low-income respondents increase pessimism by .46 points upon receiving the treatment, and high-income respondents increase pessimism by .32 points. This further strengthens the positive correlation between economic anxiety's impact on macroeconomic perceptions and demonstrates that lower income individuals are more apt to view the economy negatively in situations of economic distress than are high-income individuals.[7]

Looking at the four policies in question, for the unemployment treatment both immigration and welfare delivered significant responses. Regarding immigration, an unemployment treatment stimulus provides some support in favor of H2: low income respondents are .20 points more likely to disagree that the U.S. should continue to provide liberal opportunities for immigration (Table 2). This finding is significant with 95 percent confidence. Interestingly, although insignificant, higher income respondents are actually more likely to agree with liberal immigration policies upon receiving the unemployment treatment. Perhaps low-income respondents are less likely to support open immigration policies upon receiving an unemployment treatment because these respondents are more sensitive to job loss. The combination of less income and the potential of losing employment opportunities as immigrants enter the U.S. likely sparks discontent with immigration policy. Looking at this result in a larger context, the result implies that under periods of economic distress, where unemployment is prevalent, a utility maximizing politician would be wise to promote immigration policies that are not quick to open borders.[8]

Looking at the unemployment treatment's impact on welfare, the treatment led high-income respondents to be .24 points more likely to strongly disagree that welfare in the U.S. is too large. Although insignificant, the unemployment treatment indeed decreases lower income respondents' support of welfare in the U.S. (Table 2). The results for healthcare and student loan

[7] See appendix for graphical analysis of the control-treatment differentials both dichotomously and continuously.

[8] This is given that a significant amount of the population is low income and given that a significant amount of these low-income individuals are prone to voting. While sound theoretically, these assumptions may not hold in reality. Yet, these assumptions may have help up quite well in the 2016 Presidential election whereby a candidate who promoted nationalistic immigration policies and relied on low-income voters won.

debt forgiveness prove insignificant, but the treatment effect appears to work against H2 in both cases: the treatment leads to increased support for the ACA and debt forgiveness opportunities.

Aside from the results on economic pessimism, Table 3 demonstrates that the GDP treatment had no significant effects on policy opinions for either low or high-income respondents. Looking at the coefficient signs for low-income respondents, mixed results for H2 arise (although statistical insignificance makes these interpretations quite weak). The GDP treatment appears to make low income respondents less likely to agree with open immigration policies (similar to the result of the unemployment treatment), less likely to support the ACA (contrary to the unemployment treatment), less supportive of welfare (similar to the unemployment treatment), and more supportive of debt forgiveness programs (similar to the unemployment treatment). Interestingly, the GDP treatment had the exact opposite effect for high-income respondents on all policies (not including economic outlook). Insignificance hinders the ability to conclude that these opinions are truly opposite upon receiving the same treatment, yet the results appear to suggest that there is an income threshold whereby a change in GDP could shift policy opinions in different directions.

Looking at respondent income more broadly also provides another avenue to check how opinions on policies shift. Figure 6 in the appendix presents the results of an OLS interaction regression between each policy, the treatment, income, and an income-treatment interaction (where income is left as continuous rather than dichotomized as per H2). For the BU treatment group, the results prove insignificant: the interaction between income and the treatment has little explanatory power in this sample. For the MTurk unemployment treatment, the income-treatment interaction proves significant and demonstrates that higher income respondents were more likely to agree with less stringent immigration policies upon receiving an unemployment treatment. Interestingly, the coefficients for the treatment and income separately tell the opposite story (positive sign): as one receives the treatment and increases their income they support immigration less, but the interaction of these variables leads an individual to be more supportive of open immigration (negative sign). The GDP treatment group follows the same pattern for immigration. The interaction between the treatment and income reveals a propensity to support immigration, while income and the treatment separately indicate opposition towards immigration. Hence for the MTurk data, the income-treatment interaction dampens the

propensity to oppose more liberal immigration policies. The interaction results for the remaining policies remain insignificant.

In summary, the only significant evidence in favor of H2 is derived from the unemployment treatment's propensity to push lower income respondents to oppose open immigration policies. Although insignificant, the coefficient directions for all three samples provide mixed results on H2: the treatments do not consistently push lower income respondents to oppose the policies in question. The closest the results arrive to consistently opposing the policies is under the GDP treatment, yet these coefficients prove insignificant. Continuous income and treatment interactions reveal that for the MTurk respondents, the interaction dampens the propensity to oppose open immigration policy. Therefore, the results provide little evidence for H2: situations of economic fear do not systematically cause lower income individuals to oppose social policies.

IV. Testing Hypothesis 3 and Other Results

The last hypothesis contends that between the two MTurk treatment groups, the results for the unemployment treatment group will be more pronounced than for the GDP treatment group according to the direction of support predicted in H1. Therefore, under H3 the unemployment treatment group should be less supportive of immigration, more supportive of the Affordable Care Act, more supportive of welfare, and more supportive of student loan debt forgiveness, relative to the GDP treatment. Yet, since testing H1 revealed no significant differences between the control and treatment groups, any differences between the two treatment groups on the four policies in question are unlikely to be explained by the treatments but by extraneous factors.

Yet, the results from H2 provide some support for the contention that the unemployment effect will be stronger than the GDP effect. Firstly, the unemployment treatment provided statistically significant effects for both immigration and welfare in H2, whereas the GDP treatment provided no significant results. In addition, when comparing the coefficient sizes for economic optimism, the unemployment treatment made both high and low-income respondents more likely to view the economy negatively relative to the GDP treatment (Table 2 and 3). Although not all significant, the coefficients for immigration and debt forgiveness are also larger for the unemployment treatment (low income). For the high-income comparison, the

unemployment treatment effect is larger for immigration and welfare. This provides weak evidence supporting H3. Citizens appear to be more attuned to changes in unemployment than GDP. This proves logical: unemployment is a simple concept; it impacts all citizens at both the pocketbook and sociotropic levels. GDP is a more abstract, academic concept that individuals may not be able to comprehend. Respondents may be less likely to place GDP into the context of the national economy's health or their own personal situation.

Yet, other tests could reveal different characteristics where respondents differ. The first test generates a dichotomous variable for party identification, where Democrats are 0 and Republicans are 1. Contrary to the different treatments, all results are significant for both samples (See Figure 13 in appendix). For economic outlook, Republicans are more likely to have more positive economic outlooks than Democrats. Republican identification correlates with disagreeing that the U.S. should provide equal opportunities for immigrants. For healthcare, Republican identification correlates strongly against supporting the Affordable Care Act: Republicans are 1.31 points more likely to strongly disagree that the government should continue providing opportunities for health insurance. This result is predictable given partisan sentiment, and timely as the Republican dominated House of Representatives tries to repeal or restructure the Affordable Care Act. Looking at student loan debt forgiveness provides somewhat predictable results: Republicans are statistically significantly more likely to disagree that there should be more opportunities for debt forgiveness. Therefore, it appears that party identification acts as a stronger predictor than the treatment effects. This finding is solidified within the literature and complies with *The American Voter* and subsequent studies (Campbell, Converse, Miller, Stokes, 1960, Lewis-Beck, Jacoby, Norpoth, Weisberg, 2008).

Lastly, although not possible to test within the BU student group,[9] testing for differences between individuals with different education may reveal a more powerful explanatory variable. OLS regressions between the four policies and the education level of all MTurk respondents (coded 1-6 for less than high school through a masters degree or more) provide significant results for immigration, healthcare, and welfare (Figure 14). As one's education increases, they are more likely to support immigration, support the Affordable Care Act, and support welfare opportunities. To further test this result, an indicator for those with at least a college degree and running the same regression confirms the results from the prior education regression. As Figure

[9] The BU sample lacks variation in education level; so testing for differences is not possible.

14 in the appendix demonstrates, as one receives at least college education they are more likely to support immigration, the Affordable Care Act, and support welfare opportunities (economic optimism and debt are both insignificant). Therefore, while not as substantial as party identification, education predicts policy support within the MTurk sample.

In summary, the control-treatment experiment deployed to both an undergraduate and MTurk sample demonstrated a fairly weak treatment effect for all groups. The largest treatment effects arise for respondents' opinions on economic outlook. Questioning whether differences exist between the two groups by income level confirms the treatment's significant increase in economic pessimism and exposes significant results for immigration and welfare. There are differences between high and low-income respondents, but the economic fear treatments are not responsible for these results. Lastly, the analysis provides weak support for the idea that respondents are more sensitive to unemployment shocks than GDP shocks and suggests that differences in opinion are better explained by respondent partisanship, income, and education. It is these latter economic and demographic characteristics that policymakers and politicians should capitalize on when forming proposals or campaign strategy.

Discussion and Conclusion

A robust economic voting literature demonstrates the propensity of the American public to process economic information in either a sociotropic or pocketbook manner and translate that into a vote supporting or detracting from the incumbent candidate or party (Tufte, 1978, Key, 1957, Downs 1966, Kinder and Kiewiet, 1979, Kramer, 1983, Fiorina 1981, Lewis-Beck, 2000, Hopkins, 2012, Bartels, 2013, and Ansolabehere et. al, 2014). These studies have mainly focused on the tangible voting outcomes that arrive as a result of economic policy and shocks. This paper instead questions to what degree social policies are impacted by economic fear in order to inform policymakers on the areas that are most vulnerable during times of financial distress. The analysis relies on techniques provided by modern political economy research: namely surveys and control-treatment experiments (Feldman and Zaller, 1992, Anderson et. al, 2000, Brader et. al, 2008, Hopkins, 2012, Reeves and Gimpel, 2012, Woon, 2012, Cavaillé and Trump, 2014, Hansford and Gomez, 2015, Simonovitz, 2015, Trump, 2016, and Banks, 2016). This paper posits two differences in policy opinions, one predicts directions of policy support due simply to receiving an economic fear treatment, and another seeks differences not only due to the treatment

but by income as well. In addition, this piece posited that receiving an economic anxiety treatment focused on unemployment would have stronger effects than receiving one based on poor GDP performance.

The experimental findings demonstrate that an economic anxiety treatment alone does not have enough power to shape individual's opinions on social policies. Immigration, the Affordable Care Act, welfare, and student loan debt forgiveness provide insignificant differences between the control and treatment groups in both samples. Yet, an economic fear treatment significantly impacts individuals' outlook on the economy at large: increased economic anxiety hinders one's outlook on the national economy. Subsequently, the income-treatment interaction results demonstrate there are few policies whereby lower income respondents will decrease support under an economic fear treatment. While insignificant, the results demonstrating low-income support for policies are somewhat contrary to Trump's adjustment hypothesis, as inequality and additional economic anxiety do not consistently lead respondents to oppose out groups or policies that provide support to others (2016). Lastly, the experimental findings provide weak support for the notion that individuals are more responsive to changes in unemployment than GDP, which concurs with Banks, Brader et. al, Simonovitz, Bloom and Price, and Kiewiet (2016, 2008, 2015, 1975, and 1981). Moreover, the experimental results confirm long-held findings from *The American Voter* and subsequent studies (Campbell, Converse, Miller, Stokes, 1960 and Lewis-Beck, Jacoby, Norpoth, Weisberg, 2008). Namely, political party identification, education, and income seem to be the best identifiers to predict individual's opinions on policies or support for candidates. While not novel in any regard, upholding these classical findings maintains the relevance of political identification in society and the importance of obtaining this data when running individual-level political analyses. Furthermore, this analysis demonstrates that individuals are attuned to the state of the economy and are capable of forming sociotropic opinions in this manner. Yet, politicians should recognize and potentially take advantage of the fact that individuals are not consistently prone to changing policy opinions in wake of economic anxiety.

Regarding analytical weaknesses, the present research has several drawbacks. Firstly, in research design, using a survey methodology to attempt to capture the effects of economic anxiety leaves room for bias and non-captured effects that are immeasurable in quantitative analysis. Secondly, as mentioned in the Research Design section, the timing of the present

research may limit the causal interpretations due to difficulties disentangling whether economic anxiety stemmed from the treatment or due to the unpredictable political climate since President Trump assumed office. While using a control-treatment design mitigates this weakness, there is always the possibility of systematic bias whereby randomly assigned control respondents had a lower (higher) baseline of economic anxiety than the randomly assigned treatment respondents. Thirdly, the treatment effect findings may be weak if individuals did not comprehend or translate the real meaning of the treatment. Regarding methodology, this demonstrates the tradeoff between the desire to embed lots of information into a treatment and respondents' potentially short attention spans. While the economic optimism results reveal that respondents indeed read and were able to translate the treatment into a differing view of the economy, survey ordering could be responsible for this result. Had the questions about policies immediately preceded the treatment articles, respondents may have better maintained and translated this information into their opinions. Additionally, some unreliability could have arisen from using a newspaper article to deliver the treatment. Perhaps a more efficient way of providing an economic anxiety treatment would be a short video clip or news piece. This would be more costly and difficult to produce relative to writing the news articles.

In addition, for the Boston University sample, the tradeoff between recruitment and reliable data proved somewhat significant. Although a large number of students took the survey, a significant number did not complete the survey and were subsequently dropped from the analysis. Therefore, obtaining a larger sample for the same price using MTurk may enhance future studies with a limited budget. Lastly, the ideal version of this sample would take advantage of a natural experiment: this would enhance external and internal validity of any analysis. This could be observed at the national level or more locally. A keen researcher would measure policy opinions in a time series and compare the data between individuals who were harmed by economic change and those unharmed. Ideally, one could control for all differences including income, political identification, and education level. Therefore any observed difference in opinion would be derived from economic anxiety: for example a factory closure or increased unemployment where individuals in one region are harmed and others are not.

As noted in the introduction, the present research fits well into the political and economic climate that has defined the United States since The Great Recession. Americans have become more attuned to how the economy impacts their nation and their individual lives, and they

translate this into political behavior. Scholars should continue questioning how changes in economic variables impact support for social policies to gain a better understanding of how these pillars interact to define the American status quo. While this analysis demonstrates that the link between economic anxiety and policy support (or opposition) is fairly weak at present, society at large would benefit from continued research in this area in order to maximize welfare. Perhaps, present political behavior may be better explained by voters' racist and sexist attitudes (Schaffner, 2016). In fact, 2016 election data reveals that the education gap and subsequent racist and sexist tendencies of less-than-college educated intended voters best predicted a vote for Trump (Schaffner, 2016). The present analysis indirectly concords with these findings, as better educated respondents, who are less likely to hold racist or sexist attitudes, are more likely to support policies in line with a Democratic platform (Schnaffer, 2016). A better comprehension of how individuals respond to economic anxiety allows policymakers to better tailor proposals to meet the exact demands of constituents and prevent deadweight loss in the lawmaking procedure.

Appendix

Survey Questions and Corresponding Numerical Code

Question 1: How Optimistic do you feel about the future of the American Economy?

1. Very Optimistic
2. Somewhat Optimistic
3. Somewhat Pessimistic
4. Very Pessimistic

Question 2: How strongly do you agree/disagree with the following statement: Media reporting on the economy is easy to understand.

1. Strongly Agree
2. Agree
3. Disagree
4. Strongly disagree

Question 3: Please rate how strongly you agree/disagree with each of the following statements: The United States should allow immigrants to enter the country legally and should provide means for immigrants to have quality education, jobs, and a path to citizenship.

1. Strongly agree
2. Somewhat agree
3. Somewhat disagree
4. Strongly disagree

Q4 - The United States should continue providing opportunity for all citizens to purchase healthcare through the Affordable Care Act, and those who do not comply should pay the associated tax.

1. Strongly agree
2. Somewhat agree
3. Somewhat disagree
4. Strongly disagree

Q5 - Welfare in the United States is too large; the government supports too many individuals who do too little to support themselves financially. The United States should provide fewer opportunities for handouts.

1. Strongly agree
2. Somewhat agree
3. Somewhat disagree
4. Strongly disagree

Q6 - The United States does not provide enough opportunity for student loan debt forgiveness; there should be more public opportunities for individuals to have their educational debts excused.

1. Strongly agree
2. Somewhat agree
3. Somewhat disagree
4. Strongly disagree

Q7 - The United States should fully intervene in the civil war in Syria; they should not only commit to aerial attacks but should put soldiers on the ground in order to help end the conflict.

1. Strongly agree
2. 3. Somewhat agree
3. 3. Somewhat disagree
4. Strongly disagree

Q8 - Please mark the age range you correspond to:

1. 18-25
2. 25-30
3. 31-40
4. 41-50
5. 51-60
6. 61-70
7. 71-80
8. 81-90
9. 90+

Q9. Gender

1. Male
2. Female
3. Other

Q10. Race

1. American Indian or Alaska Native
2. Asian
3. 3. Black, non Hispanic
4. Native Hawaiian or Other Pacific Islander
5. White, non Hispanic
6. Hispanic or Latino or Spanish Origin of any race
7. Race and Ethnicity Unknown

Q11. Education

1. Less than high school
2. High school
3. Some college
4. Bachelors
5. Professional degree
6. Masters or More

Q12. US Citizen

1. Yes
2. No

Q13. Party

1. Democrat
2. Lean Democrat
3. Independent
4. Lean Republican
5. Republican

Q14. Income

1. 0-25k
2. 26-50k
3. 51-75k
4. 76-100k
5. over 100k

Treatment and Control Articles (reproduced for easier reading)

BU Control Article

FEATURES, INBUSINESS

Looking Ahead: Job Market as Expected for Upcoming Grads

by Sam Korvinich

It is never surprising to hear that your friends are concerned about where they are going to end up after college. For many, that anxiety starts on the first day of school freshman year. In many cases this fear is unnecessary people who graduate from top ranked schools like Boston University generally land on their feet. This seems to be the case for upcoming graduates.

One key economic indicator that provides insight to this question is the percent of college students who report being adequately employed five months after graduation. Nationwide polling delivers expected results on this front: 80 percent of 2016 college graduates report obtaining employment that met their expectations given their degree.

Over the past 6 years (after the economic decline) these numbers have grown from 60 percent in 2010 to around 80 percent in 2012 onwards. It seems that upcoming graduates' concerns on employment are largely baseless.

We interviewed BU recent graduates, asked about their employment current situation and what they thought the outlook was for college graduates in the coming years:

2017 graduates are facing a "normal" economy, and the number of college students employed after graduation has met expectations. Photo by DFP Staff

Jack Seinberg graduated from BU's Questrom School of Business in 2016 with a degree in Organizational Behavior. He graduated with a 3.35 GPA, and was active in several student groups on campus. He told us, "I applied for over twenty jobs last year, and I heard back from about half of them." He continued, "I feel like the economy is fine for graduates…most people I know only applied to 3 or 4 jobs and they are doing just fine."

Clarice Williams graduated from BU's College of Arts and Sciences with a Psychology degree and a Spanish minor. She had a 3.85 GPA and helped Spanish programming for the Language Link. She hoped to find a job helping Spanish Speakers find proper counseling and caseworkers to solve personal problems. She told us "with my advisor's help I found a position at a Boston Medical Center affiliate; I'm quite satisfied with my work life." Although Clarice has student debt, she said, "as long as you stay on top of your loan payments, everything should go as planned."

With the economy meeting what one BU Economics professor described as "normal conditions," the state of the job search for 2017 graduates and beyond seems to be normal as well.

BU Treatment Article

FEATURES, INBUSINESS

Should You Be Concerned? Fear on Campus Imminent as Jobs Disappear

by Sam Korvinich

It is never surprising to hear that your friends are concerned about where they are going to end up after college. For many, that anxiety starts on the first day of school freshman year. In many cases this fear is unnecessary, people who graduate from top ranked schools like Boston University generally land on their feet. Yet, this year the fear appears to be validated.

One key economic indicator that provides insight to this problem is the percent of college students who report being adequately employed five months after graduation. Nationwide polling delivers bleak results on this front: only 25 percent of 2016 college graduates report obtaining employment that meets their expectations given their degree.

In other words, a full 75 percent of the national graduating class of 2017 reports doing work that is either inadequately paid, not enough hours, or not rigorous enough given the individual's degree.

We interviewed BU graduates who met this description, asked for their current situation and what they thought the outlook was for college graduates in the coming years:

2017 graduates are facing a weak economy, and the number of college students employed after graduation won't meet expectations this year. Photo by DFP Staff

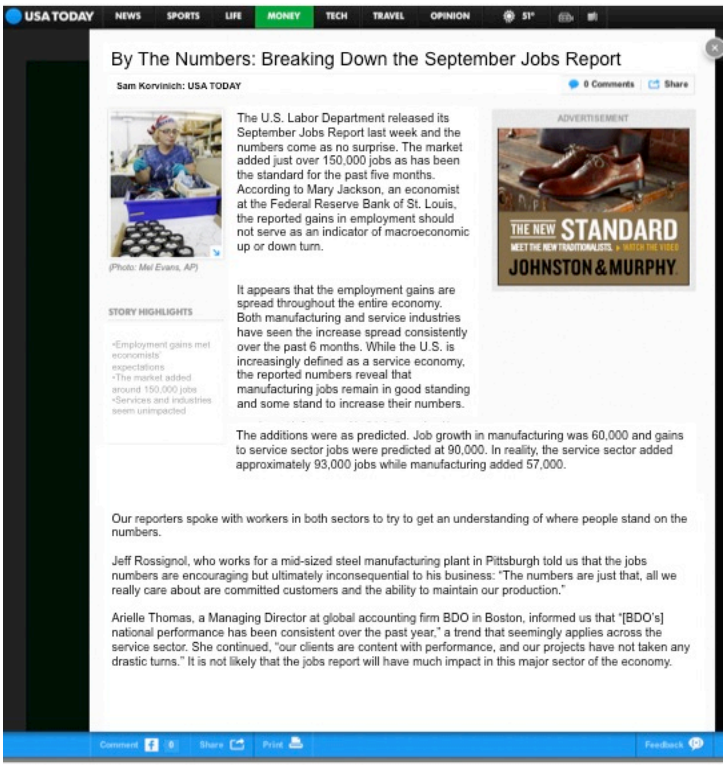
Jack Seinberg graduated from BU's Questrom School of Business in 2016 with a degree in Organizational Behavior. He graduated with a 3.35 GPA, and was active in several student groups on campus. He told us, "I applied for over twenty jobs last year, and even though I had a good resume, GPA, and all that, I hardly heard back from any companies." He continued, "I feel like the time just isn't right for my class, and it doesn't seem to be getting any better for those who will be graduating in the next few years: I know I'm not an anomaly in my BU friend group."

Clarice Williams graduated from BU's College of Arts and Sciences with a Psychology degree and a Spanish minor. She had a 3.85 GPA and she helped with Spanish programming for the Language Link. She had hoped to find a job helping Spanish Speakers find proper counseling and caseworkers to solve personal problems. She told us "I found out very quickly that even though my background fit this job description seamlessly, all the positions were at the unpaid level." With heavy student debt, Clarice is currently working as an office assistant part time, living at home, and trying to save up for graduate school.

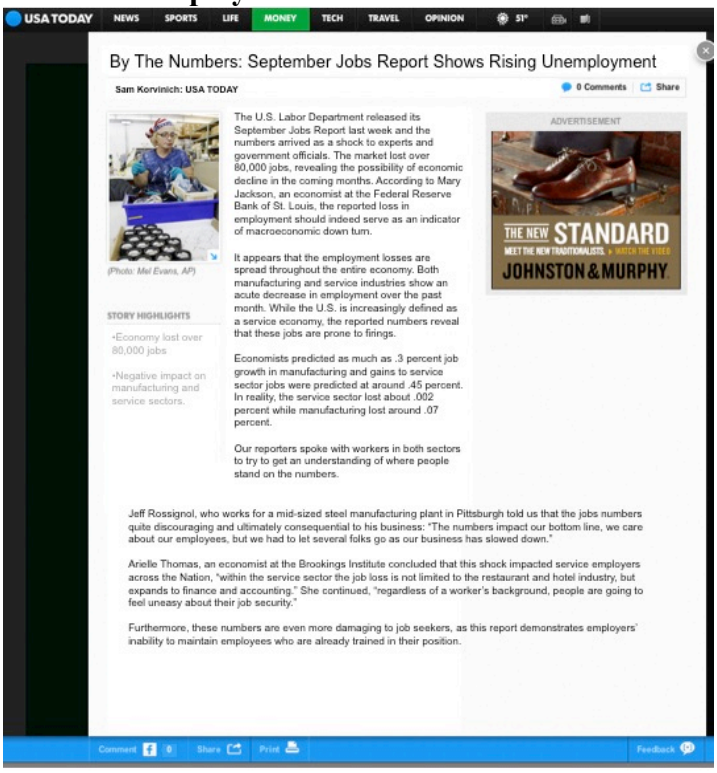
A poll of current BU students found that 68 percent are worried about their ability to find adequate work in a rapidly changing economy. This same poll was conducted last year and found that only 49 percent of respondents shared this fear. Clearly, as the job market for recent grads fluctuates, so too does unease on campus.

The current economic climate suggests it will take a long time for recent and upcoming graduates to meet their goals outside of the classroom.

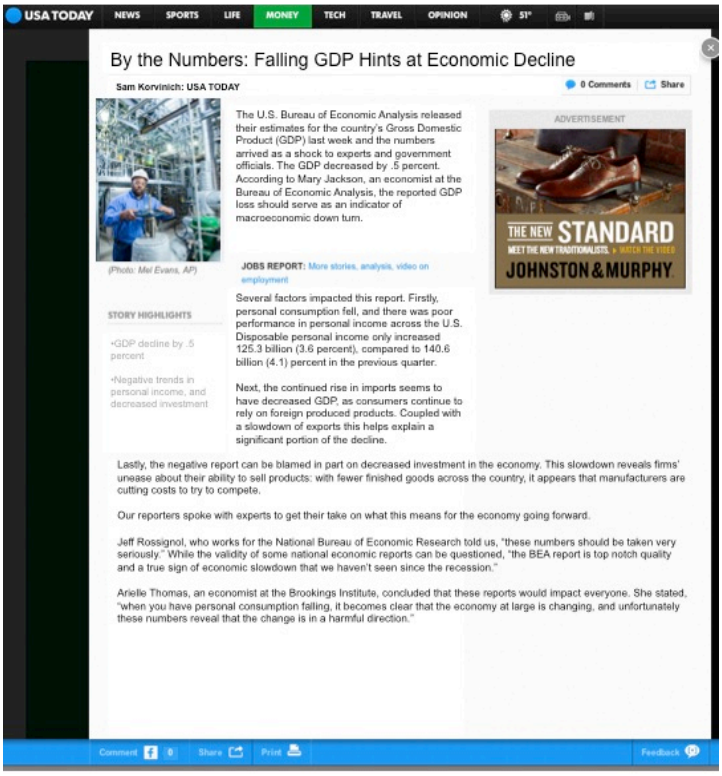
MTurk Control Article



MTurk Unemployment Treatment Article



MTurk GDP Treatment Article



Descriptive Statistics

Boston University Respondents

	Mean	Standard Deviation	Min	Max
Age	1.08	0.42	1	5
Gender	1.68	0.47	1	3
Race	4.52	1.40	1	7
Education	3.79	0.80	2	6
US Citizen	1.08	0.27	1	2
Political Party	1.86	1.05	1	5
Income	1.40	0.82	1	5
Treatment	-	-	0	1

N=258
Control=128
Treatment=130

MTurk Respondents

	Mean	Standard Deviation	Min	Max
Age	2.92	0.99	1	4
Gender	1.41	0.50	1	3
Race	4.62	1.10	1	7
Education	3.82	1.13	1	6
US Citizen	1.01	0.12	1	2
Political Party	2.46	1.33	1	5
Income	2.26	1.09	1	5
Unemp. Treatment	-	-	0	1
GDP Treatment	-	-	0	1

N=889
Control= 289
Unemployment Treatment=325
GDP Treatment=275

Figure 1.

Economic Optimism

Unemployment Treatment	Very Optimistic	Somewhat Optimistic	Somewhat Pessimistic	Very Pessimistic	Total
No (%)	15.57	55.71	22.84	5.88	100.00
Yes (%)	3.69	28.62	52.62	15.08	100.00
Total (%)	9.28	41.37	38.60	10.75	100.00

Pearson chi2 (3)=97.57
Pr-0.00
N=614

Figure 2.

Economic Optimism

GDP Treatment	Very Optimistic	Somewhat Optimistic	Somewhat Pessimistic	Very Pessimistic	Total
No (%)	15.57	55.71	22.84	5.88	100.00
Yes (%)	5.82	37.82	47.64	8.73	100.00
Total (%)	10.82	46.99	34.93	7.27	100.00

Pearson chi2 (3)=48.37
P=0.00
N=564

Figure 3. Chi Square Results of Economic Optimism by BU Treatment

	Economic Optimism				
BU Treatment	Very Optimistic	Somewhat Optimistic	Somewhat Pessimistic	Very Pessimistic	Total
No (%)	4.69	51.56	38.28	5.47	100.00
Yes (%)	2.33	43.41	41.09	13.18	100.00
Total (%)	3.50	47.47	39.69	9.34	100.00

Pearson chi2 (3)=6.13
P=0.11
N=257

Figure 4. H1 OLS Regression Results

Unemployment Treatment	Coefficient	Standard Error
Immigration	0.07	(0.08)
Affordable Care Act	-0.00	(0.09)
Welfare	0.08	(0.09)
Debt Forgiveness	-0.05	(0.08)
GDP Treatment	**Coefficient**	**Standard Error**
Immigration	0.05	(0.08)
Affordable Care Act	0.00	(0.09)
Welfare	-0.02	(0.09)
Debt Forgiveness	0.01	(0.08)
BU Treatment	**Coefficient**	**Standard Error**
Immigration	-0.00	(0.10)
Affordable Care Act	0.01	(0.11)
Welfare	0.02	(0.11)
Debt Forgiveness	-0.04	(0.11)

*10% significance
**5% significance
***1% significance

Figure 5. H2 OLS Regression Results (Reproduced in Paper)

Unemployment Treatment **N: 614**	Low Income	High Income
Economic Pessimism	0.65 (0.08)***	0.51 (0.10)***
Immigration	0.20 (0.10)**	-0.15 (0.13)
Healthcare	-0.00 (0.11)	0.02 (0.15)
Welfare	-0.01 (0.10)	0.24 (0.15)*
Debt	-0.11 (0.09)	0.05 (0.15)
GDP Treatment **N: 564**	Low Income	High Income
Economic Pessimism	0.46 (0.08)***	0.32 (0.10)***
Immigration	0.16 (0.10)	-0.13 (0.13)
Healthcare	0.03 (0.12)	-0.06 (0.16)
Welfare	-0.11 (0.11)	0.16 (0.15)
Debt	-0.10 (0.10)	0.17 (0.14)
BU Treatment **N: 257**	Low Income	High Income
Economic Pessimism	0.22 (0.10)**	0.44 (0.33)
Immigration	-0.01 (0.11)	-0.02 (0.36)
Healthcare	0.05 (0.12)	-0.30 (0.36)
Welfare	0.03 (0.12)	-0.08 (0.33)
Debt	-0.05 (0.11)	-0.17 (0.34)

*10% significance
**5% significance
***1% significance

Figure 6. OLS Income Interaction Regressions (using Income Continuously)

Unemployment Treatment	Coefficient	Standard Error
Economic Pessimism		
Income	-0.05	(0.04)
Treatment	0.72	(0.14)***
Income*Treatment	-0.05	(0.06)
Constant	2.31	(0.10)***
Immigration		
Income	0.09	(0.05)*
Treatment	0.53	(0.18)***
Income*Treatment	-0.21	(0.07)***
Constant	1.77	(0.13)***
Affordable Care Act		
Income	0.04	(0.06)
Treatment	0.16	(0.21)
Income*Treatment	-0.07	(0.08)
Constant	2.25	(0.15)***
Welfare		
Income	-0.28	(0.06)***
Treatment	-0.11	(0.19)
Income*Treatment	0.08	(0.08)
Constant	3.09	(0.14)***
Debt		
Income	0.11	(0.05)**
Treatment	-0.08	(0.19)
Income*Treatment	0.01	(0.07)
Constant	1.72	(0.13)***
GDP Treatment	Coefficient	Standard Error
Economic Pessimism		
Income	-0.05	(0.04)
Treatment	0.45	(0.14)***
Income*Treatment	-0.02	(0.06)
Constant	2.31	(0.10)***
Immigration		
Income	0.09	(0.05)*
Treatment	0.42	(0.17)**
Income*Treatment	-0.16	(0.07)**
Constant	1.77	(0.12)***
Affordable Care Act		
Income	0.04	(0.59)
Treatment	0.00	(0.21)
Income*Treatment	0.00	(0.08)
Constant	2.26	(0.15)***
Welfare		
Income	-0.23	(0.06)***
Treatment	-0.25	(0.20)
Income*Treatment	0.11	(0.08)
Constant	3.10	(0.14)***
Debt		
Income	0.11	(0.05)**
Treatment	-0.25	(0.19)
Income*Treatment	0.11	(0.07)
Constant	1.72	(0.13)***

BU Treatment	Coefficient	Standard Error
Economic Pessimism		
Income	-0.16	(0.08)*
Treatment	0.20	(0.17)
Income*Treatment	0.02	(0.11)
Constant	2.66	(0.12)***
Immigration		
Income	0.05	(0.09)
Treatment	-0.07	(0.21)
Income*Treatment	0.04	(0.13)
Constant	1.40	(0.15)***
Affordable Care Act		
Income	-0.10	(0.10)
Treatment	-0.18	(0.22)
Income*Treatment	0.11	(0.14)
Constant	1.90	(0.16)***
Welfare		
Income Dummy	0.08	(0.10)
Treatment	0.09	(0.22)
Income*Treatment	-0.04	(0.13)
Constant	3.08	(0.25)***
Debt		
Income	0.15	(0.10)*
Treatment	-0.09	(0.21)
Income*Treatment	0.02	(0.13)
Constant	1.52	(0.15)***

*10% significance
**5% significance
***1% significance

Figure 7. Unemployment Treatment and Economic Optimism by Income

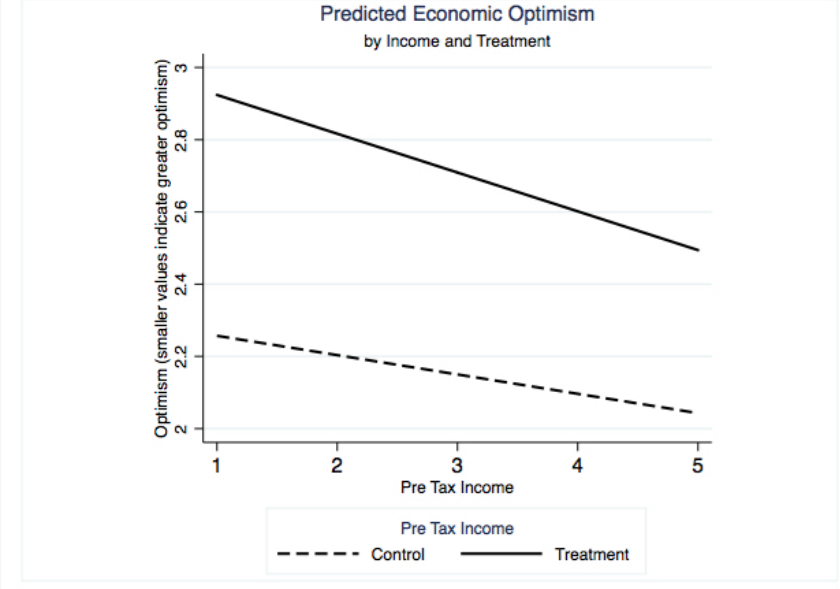


Figure 8. GDP Treatment Economic Optimism by Income

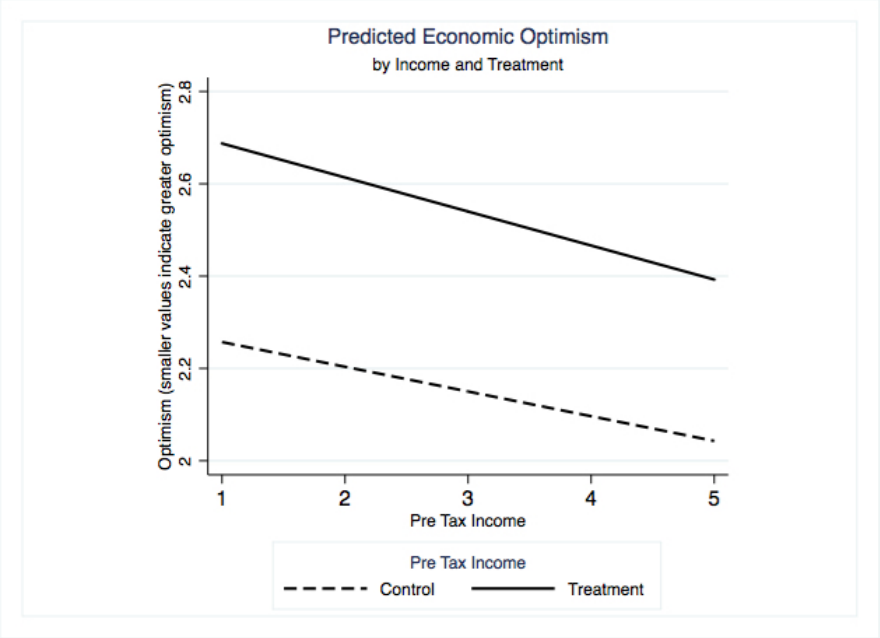


Figure 9. BU Treatment Economic Optimism by Income

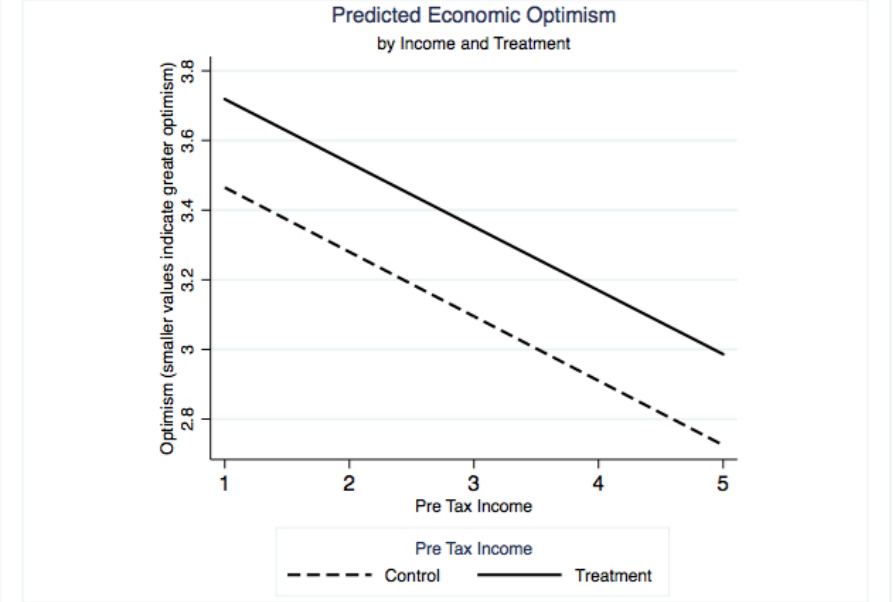


Figure 10. Unemployment Treatment: Economic Optimism by Income

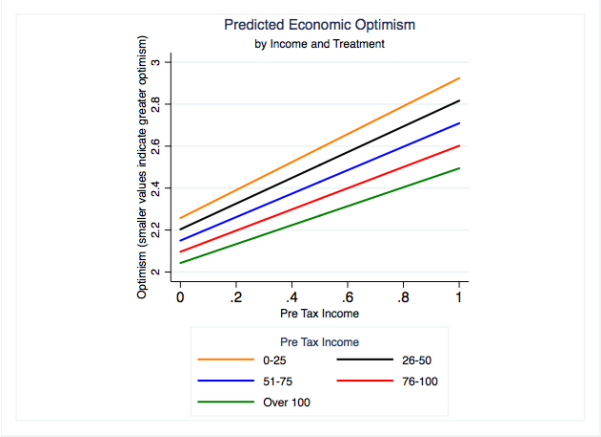


Figure 11. GDP Treatment: Economic Optimism by Income

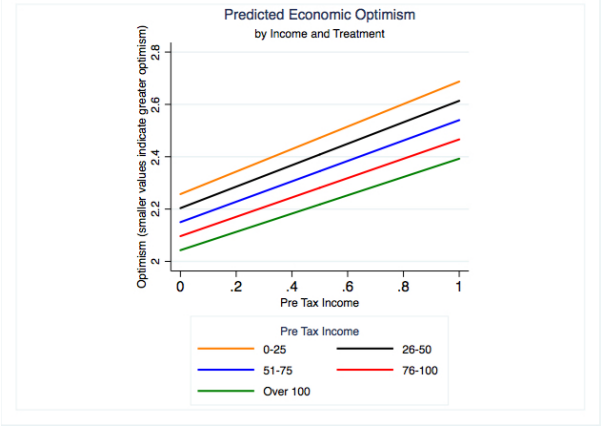


Figure 12. BU Treatment: Economic Optimism by Income

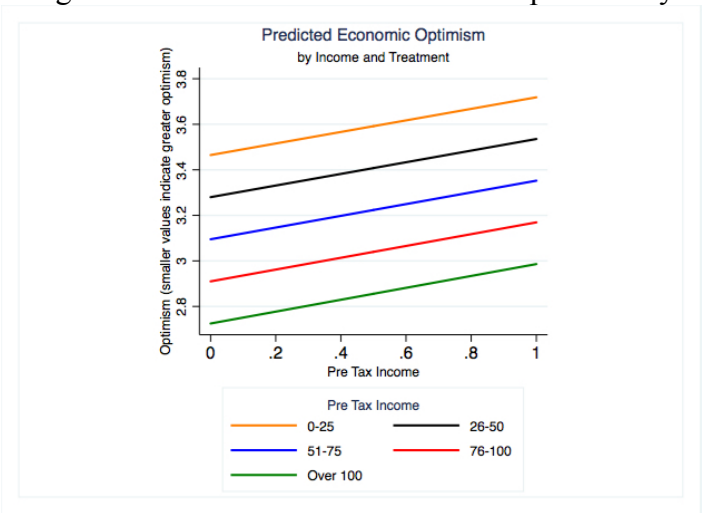


Figure 13. Testing Opinions by Party Identification (OLS Regressions)

MTurk Sample

Policy	Coefficient	Standard Error
Economic Pessimism	-0.37	(0.06)***
Immigration	0.73	(0.07)***
Affordable Care Act	1.31	(0.09)***
Welfare	-1.22	(0.07)***
Debt	0.79	(0.07)***

N=678

BU Sample

Policy	Coefficient	Standard Error
Economic Pessimism	-0.73	(0.17)***
Immigration	0.48	(0.21)***
Affordable Care Act	1.31	(0.21)***
Welfare	-1.70	(0.19)***
Debt	0.79	(0.20)***

N= 199
*10% significance
**5% significance
***1% significance

Figure 14. Testing Opinions By Education (OLS Regressions: MTurk sample only due to no variation in BU Sample)

Continuous Education

	Coefficient	Standard Error
Economic Pessimism	0.00	(0.02)
Immigration	-0.15	(0.03)***
Affordable Care Act	-0.07	(0.04)*
Welfare	0.08	(0.03)***
Debt	0.00	(0.03)

Education Dummy

Policy	Coefficient	Standard Error
Economic Pessimism	0.02	(0.39)
Immigration	-0.34	(0.06)***
Affordable Care Act	-0.16	(0.10)*
Welfare	0.17	(0.07)***
Debt	-.07	(0.07)

N=889
*10% significance
**5% significance
***1% significance

Figure 15. BU Economic Pessimism by Party ID (0 Democrat, 1 Republican)

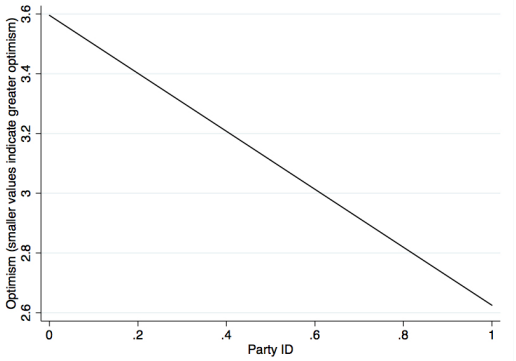


Figure 16.BU Immigration by Party ID (0 Democrat, 1 Republican)

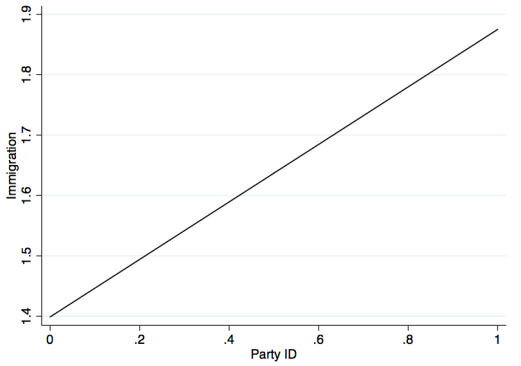


Figure 17. BU Affordable Care Act by Party ID (0 Democrat, 1 Republican)

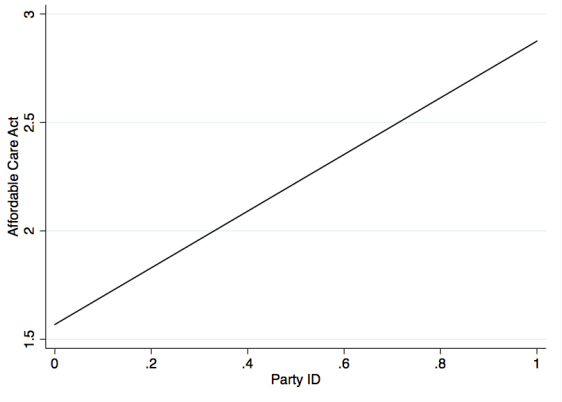


Figure 18. BU Welfare by Party ID (0 Democrat, 1 Republican)

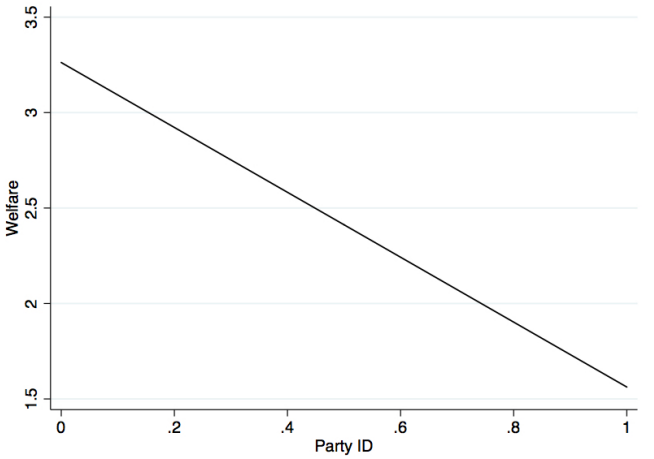


Figure 19. BU Debt by Party ID (0 Democrat, 1 Republican)

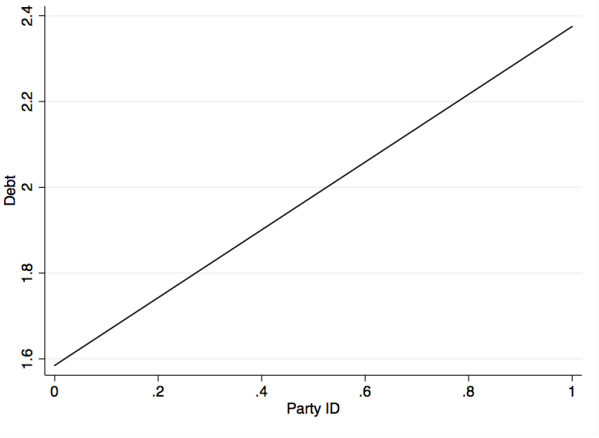


Figure 20. MTurk Economic Pessimism by Party ID (0 Democrat, 1 Republican)

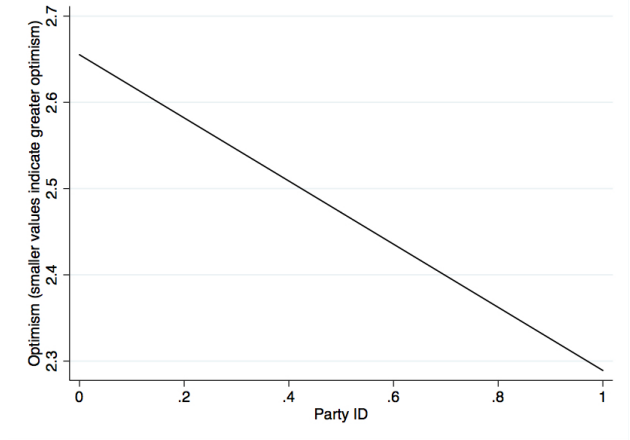


Figure 21. MTurk Immigration by Party ID (0 Democrat, 1 Republican)

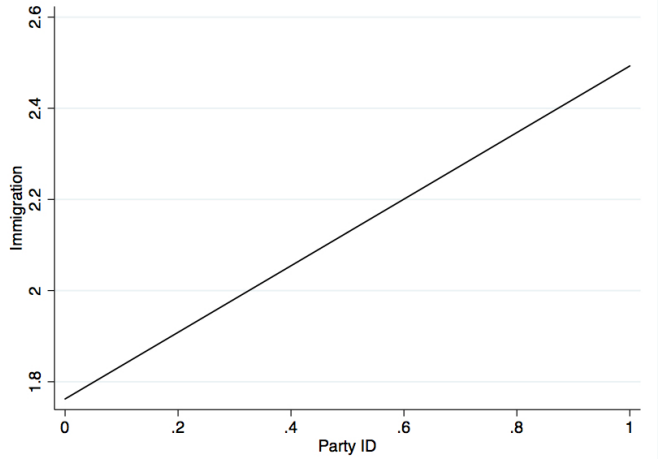


Figure 22. MTurk Affordable Care Act by Party ID (0 Democrat, 1 Republican)

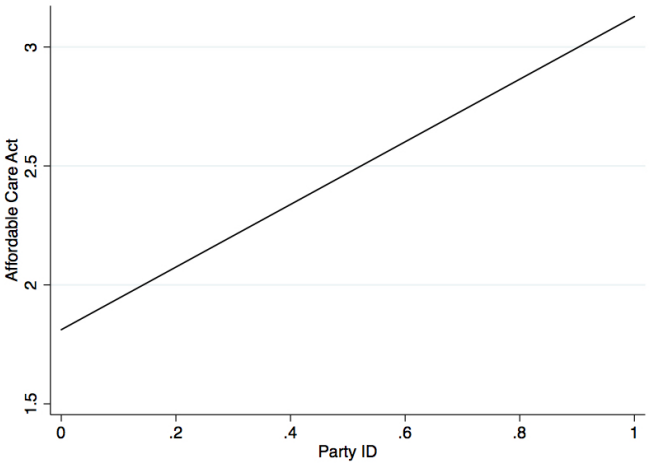


Figure 23. MTurk Welfare by Party ID (0 Democrat, 1 Republican)

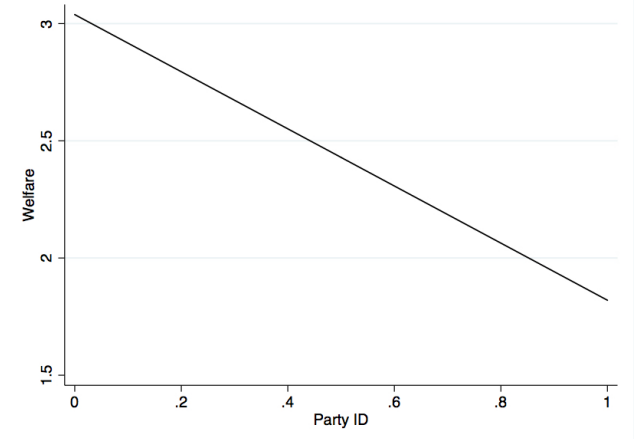


Figure 24. MTurk Debt by Party ID (0 Democrat, 1 Republican)

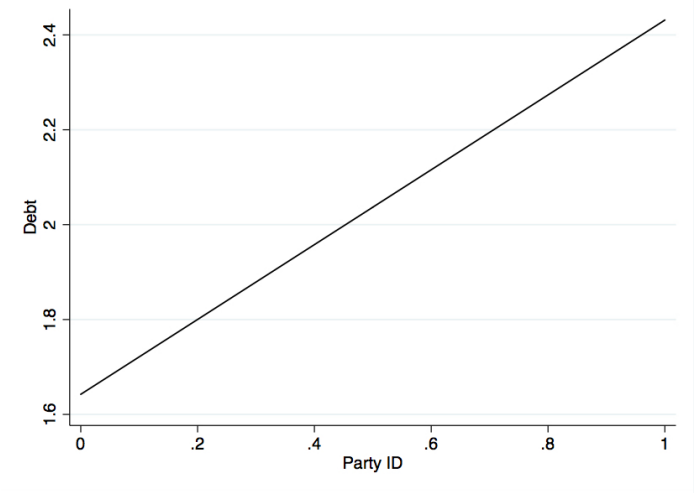


Figure 24. MTurk Immigration by Education (0, Less than College, 1 College or More)

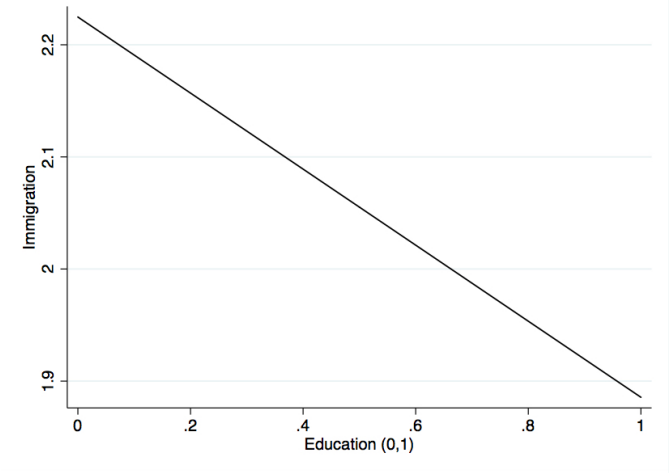


Figure 25. MTurk Affordable Care Act by Education (0, Less than College, 1 College or More)

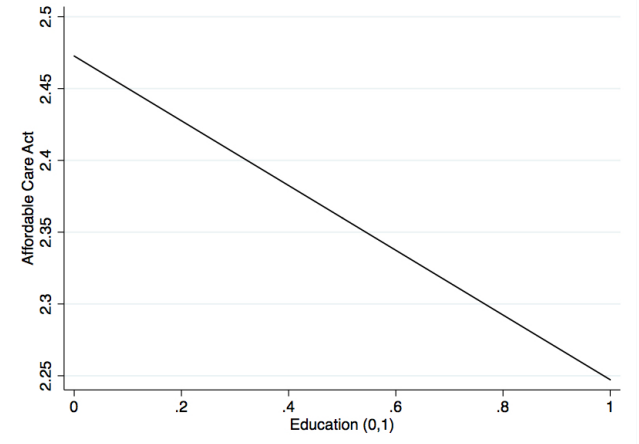
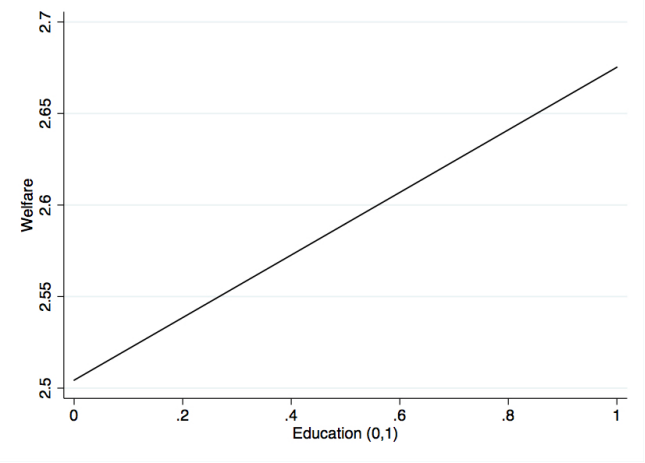


Figure 26. MTurk Welfare by Education (0, Less than College, 1 College or More)



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